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Big Profits on New Seminole Properties Not in Sight on Present Market

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA, April 30

WITH both the Seminole district and the state of Oklahoma reaching new highs in daily average production the past week, the big question of the moment is one of price. Whether other crude buying companies will come to the position taken by the Magnolia Petroleum Co. in its two price reductions this month has not yet been indicated by any of them, even faintly. Probably they don't know.

The closest approach to evidence of the inner thoughts of any of them was the bearish statement in *The Lamp*, official publication of the Standard Oil Co. of New Jersey, the past week. That however, was an analysis of the general scheme of things, with whose broad phases all oil men are already acquainted.

Magnolia has gone along getting a large part of its purchased oil at 25 cents under the other price postings, since April 20. Field reports indicate that it has not lost much oil because of the reduced postings. As pointed out in these columns at the time the April 7 cut was made, producers who sell to Magnolia would find it difficult to change connections at this time.

The company is peculiarly situated also in many fields, having little competition in buying, and, in the fields where conditions are more competitive, Magnolia's runs are chiefly from its own properties. Of the 80,000 to 85,000 barrels it is currently buying in Oklahoma, Kansas, north and north central Texas, probably 30,000 barrels classifies as "free" oil, but much of the latter is subject to various agreements and contracts between Magnolia and the producer, so that no great inroad would be possible in the event any company decided to try to raid the Magnolia connections. However, nobody does.

With respect to the other major Mid-Continent buyers, all of them are represented in the Seminole field and here may be found a reflection of their present thoughts on the price of oil. There is fairly general belief that Seminole is a hugely profitable play for everyone who got into it, but cost figures show that as a general thing, it is not so on development at this time.

It has cost at least 15 million dollars to drill the Seminole pool, proper, up to April 20 and the recovery for this pool as of that date was around 31,500,000 barrels. That figure covers drilling alone, having nothing to do with all the air plants installed, tankage required, operating expenses of all kinds, cost of acreage and the various other cost factors that will be included in the final summing of the field. Some handsome profits have been made but the present market is much under that at which a large amount of the oil was sold.

It is not possible at this time to strike a profit and loss statement on Seminole, or any part of it. No company in there would be able to do it even if it desired ever so ardently; therefore, the whole thing would be little better than an educated guess. The writer believes, however, that the experience in that field has some bearing—remote, at least—on the considerations which go into the making of a field price for oil.

The settled production in this territory, as elsewhere, is out of the running this year so far as profits are concerned. In years like this it is the flush stuff that dominates. If a profit cannot be made even on it, then it becomes time for the producing industry to retire, temporarily, from the business of finding new supplies.

AT Seminole, various conditions have been encountered. Some properties have made very large per acre yields and at the foot of the list are some that have not returned the investments made and even some that probably never will.

It appears fair to take as typical of the amount that must be invested, the figures on a 40-acre tract. There are many such sized leases in the district. While it is true that the cost of developing and operating a larger tract would not increase in true proportion to that applying to a 40-tract, the figures cited here afford a basis for better understanding of the Seminole development and nullification of the argument that

ONE of the most important articles which *National Petroleum News* has published in some time is that on the possible excessive costs of carrying acreage for future oil reserves at anything like the present scale of values. This is to be found starting on page 50, together with an open letter from the head of one of the major companies in this country, which inspired this article.

The present surplus of production has led to considerable discussion of prices and operating costs for producing companies particularly. The point taken up here of the burden of too high acreage costs, and the impetus the present range of values gives to wildcatting, is one of the most important which has yet been brought forward.

whatever losses a producing company sustains elsewhere because of the low market, it will regain if it is lucky enough to be in the Seminole play.

This 40-acre lease with wells spaced one to each 10 acres, will require expenditure of $280,000 for drilling, or $70,000 per well. That amount of money completes the well and fits it to produce on a natural flow basis.

Tank batteries will require an investment of about $7,500—to install tanks having total capacity of 1,850 barrels, which is a sufficiently modest program for production of this character.

A treating plant, with boilers, would call for about $2,000.

As the future has at all times been uncertain with regard to the life of the wells, temporary pressure plants were much used until some idea could be gained of the well's performance. Also, these could be put in quickly and put to use while the permanent plant was being built. A temporary six-unit plant would average about $37,000 investment and crediting it now with the salvage of 50 per cent, as is standard practice, it would represent $18,500.

THE permanent pressure plant of eight units would cost about $60,000.

This typical lease would require at least two houses for employes. With sewerage, water, lights and gas, this expense would amount to around $5,000.

Four pumping derricks, to replace the drilling rigs, would cost about $7,200. Gas engines and housings, which assuredly will have to be provided to handle tubing jobs during the flowing life of the well and to pump it later, will cost around $14,000 for the four wells.

Pumping equipment, certainly an item to be reckoned with for the time when the air lift ceases to function, and the cost of cleaning out and shooting, will require about $11,500.

Gas, water air and oil lines for the lease, and meters, will call for about $3,000, including the laying of the lines.

There would be, therefore, a total investment of $427,200. Against this can be set up the $18,500 salvage on the temporary pressure plant and $12,000 for the four drilling derricks, or $30,500. This leaves an investment of $396,700 on the lease, or allocating it on an acreage basis, $9,917.50.

At the present price of $1.38 per barrel for Seminole oil, an acre would have to yield 7,187 barrels merely to return this investment. No consideration is given to a host of other expense factors. It requires, at the minimum, around $1,000 per month per well to meet the cost of operating, not including interest or depreciation. This will be reduced at some time possibly at the end of six months, to around $700 per well.

On the basis of lease investment alone, Seminole pool proper has more than paid out, for up to April 20, the average yield per acre was about 8,800 barrels and a considerable part of it was sold at prices considerably higher than those now in effect.

A new property of the character visualized in the foregoing figures, developed from now on, would find the going much heavier. And, assuming that the market should be cut 25 cents—the amount that Magnolia has cut it—an acre would have to yield as much as the field has averaged to date to return merely development cost and investment for lease equipment.

As remarked previously, some properties have yielded big returns and it is the average that is here discussed. It is not an attempt to prove that the market will not be reduced, but an attempt to show that the present price is at the point where the certain profits are no longer in sight.

No account has been taken of the natural gasoline produced. At the present scale of prices for this product its production has hardly represented a profit.

S. O. Indiana to Build Refinery at Saginaw

Staff Telegram

CHICAGO, May 2.—The Standard Oil Co. of Indiana will build at once a 1000-barrel a day skimming plant at Saginaw, Mich., to serve the company's Michigan trade. The estimated cost of the plant is $200,000. Contracts were signed by the Standard last week with the Saginaw Prospecting Co. and the Fordney Petroleum Co., for crude. The new Saginaw field crude is about 44 gravity, A. P. I.

The Standard has taken an option on 48 acres of land for the refinery site.

Bowlegs Field Further Proved

Staff Telegram

TULSA, May 3.—Two wells in the Bowlegs field of the Seminole district further prove that territory for big production. One of these is the Prairie Oil & Gas Co.'s No. 1 Harber in the southeast of the southwest of 10-8-6. It made 190 barrels per hour in pay from 3880 to 3894 feet and is the highest well structurally in the field thus far.

The other is also a Prairie well being No. 1 Gahagan in the northwest of 23-8-6 and flowed 130 barrels an hour from pay topped at 4316 feet. The Bowlegs field on Monday produced 83,000 barrels while the district made a new high of 352,000 barrels.

Coming Meetings

Kansas Oil Men's Association, Hotel Broadview, Wichita, Kans., May 12, 13.

Association of Natural Gasoline Manufacturers, Mayo Hotel, Tulsa, Okla., May 24, 25, 26.

West Virginia Oil Marketers Association, Kanawha Hotel, Charleston, W. Va., June 15, 16.

Standardization Conference, American Petroleum Institute, Broadmoor Hotel, Colorado Springs, Colo., June 15, 16, 17.

S. O. of Indiana Files Patent Suit Brief

INDIANAPOLIS, May 4.—The Standard Oil Co. of Indiana today filed with Charles Martindale, master in chancery, its brief in the equity case brought by the United States government against it and 51 other oil companies to enjoin them from carrying out certain contracts relating to the use of patented processes for cracking oil.

The original suit was filed by the government in federal court for the northern district of Illinois on June 25, 1924. The case will be argued before the master in chancery in Indianapolis on May 16.

In its brief the Standard Oil Co. of Indiana alleges that the suit is founded on an entire misunderstanding, by the government, of the purpose and effects of these contracts and their result. It points out the errors into which the company alleges the government has fallen in its construction of these contracts and declares that from 1913 until 1921 the Standard Oil Co. was the only company that had succeeded in developing a process by which the quantity of gasoline obtainable from a given quantity of crude oil could be practically doubled.

That it had received patents from the United States upon this process and was legally entitled to refuse to license any other company or individual to use it. That had it so refused there would have been a vast shortage of available gasoline during that period. That in order to avert such a shortage it licensed every refiner who desired to use the process, charging therefor only 25 cents out of each dollar net profit which the licensed refiner made by the use of the process and imposing no conditions that were not reasonably necessary for the protection of its own business.

Viscount Cowdray Dead

CLEVELAND, May 2—News of the the death May 2, in Scotland, of Viscount Cowdray served to recall his great influence in oil development in Mexico. Cowdray, who was then Sir Weetman Pearson, took part in the early development of Tampico district and exploratory work on Isthmus of Tehuantepec under firm style of Sir Pearson's Sons, Ltd. This firm afterwards became the Mexican Eagle Oil Co., Ltd., otherwise known by the Spanish name "El Aguila".

Pearson and his associates kept the company until eight or ten years ago, when the sale of stock control was made to the Royal Dutch-Shell group. Amerada Petroleum Co., formed for operations in United States and Canada by former officials of Cowdray's Mexican interests, is said to have been originally financed through him after his sale of stock control in "El Aguila". Viscount Cowdray was 71 years old at death.

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Tennessee Price-Fixing Law Held Up: Court Considers Final Disposition

By Ward K. Halbert
N. P. N. Staff Writer

By Telegraph

NASHVILLE, May 2

TENNESSEE, in spite of popular belief to the contrary, is not in control of the gasoline business and does not regulate the price, has not done so and may never. A law was passed by the 1927 legislature creating a state department of motor fuels and empowering that department to regulate gasoline price but the law has never been operative.

It was signed by Governor Austin Peay late in February but the administration's meddlesome finger in the gasoline business was paralyzed by a temporary restraining order at once.

The validity of this price fixing law was challenged by four major oil companies in federal court here April 30 and some oil men believe it will be adjudged unconstitutional before the legislature that passed it adjourns. Argument was heard by Judge Charles A. Moorman of Louisville, Ky., United States Circuit Court of Appeals, and two district judges, John J. Gore of Nashville and Sen Hicks of Knoxville. Judge Moorman held the attorneys on both sides to a strict discussion of the point of law.

Facts that might have provoked the passage of the bill crept into the record only through poetical inference in flights of oratory by attorneys for the state, H. D. Minor represented Standard Oil Co. of Louisiana; P. S. McKay, Pan American Petroleum Co.; E. S. McDonald, National Refining Co. and John Bell Keeble, The Texas Co. All came from Memphis but Mr. Keeble. Small jobbers operating in only a few counties each were on the side of the state. They even paid part of the legal talent that defended the new law in federal court. J. J. Lunch of Chattanooga and Charles T. Kates, a former attorney general, pleaded the defense for L. D. Smith, attorney general.

The smaller Independents of Tennessee are nearly all opposed to price fixing by the state, although they are fighting for the law. The apparent contradictory attitude is a matter of local politics. The Independents were incensed by a protracted price situation last year when most of them were buying on marginal contracts based on the posted tank wagon price and major companies were rebating and selling below the recognized market.

They suffered severely and wanted a law against what they considered unfair marketing practices. Governor Peay and his political associates wanted a straight price fixing bill when the legislature convened and instructed the general assembly to pass such a law.

The administration recognized its inability to get such a bill passed without the help of the Independent jobbers and the jobbers knew the governor would not sign a gasoline bill without a price fixing feature. The ultimate law was a compromise bill carrying both features. The governor acknowledges that this was the situation and several oil jobbers, including Al D. McKnight of Murfreesboro, who himself is leader of the senate and introduced the bill in question, say they would be glad to see the court cut out the price-fixing features and leave only a law setting up a standard of ethics in oil marketing. The court's decision in this matter cannot be handed down in less than two weeks and it may be considerably longer.

American Oil Corp. Has New Motor Lubricant

DETROIT, May 2.—An advertisement in a Detroit newspaper showing a man in the act of nailing up a sign advertising SavaPowr lubricants of the American Oil Corp., Jackson, Mich., is a part of the campaign of that company in which it calls attention to the new octagonal red, white and blue signs which it is putting up at all of its Detroit stations to designate them as the places where SavaPowr oil may be bought.

Better lubrication at less cost is the promise for SavaPowr users. The company in the advertisement calls attention to the fact that it has been making lubricants since 1904 for the country's leading automobile manufacturers.

H. H. Ragle said the oil was something new but did not reveal its nature other than to say it was not prediluted.

Stocks of Oils Except Lubes Gain in March

CLEVELAND, May 3.—Another record month of crude production was reached in March, a 31-day month, when output totaled 75,304,000 barrels, an increase of 7,430,000 barrels over February, a 28-day month, the previous record month. Daily average crude production in March was the largest in history, amounting to 2,429,000 barrels, an increase of 5000 barrels over February daily average, Bureau of Mines reports show. The 5000-barrel increase was due to Seminole production, which was 280,000 barrels daily average in March.

Production and stocks of refined products except lubricants increased in March.

March crude stocks east of California exceeded February stocks by 4,436,000 barrels, stocks in the latter month having been the largest since 1923. Crude stocks east of California stood at 289,894,000 barrels March 31. Crude stocks in California increased 44,000 barrels to 117,454,000 barrels.

Gasoline production and stocks gained in March, 2,862,000 barrels and 2,696,000 barrels, respectively. Output was 27,886,000 barrels, a daily average of 900,000 barrels, an increase of 6000 barrels over daily average output of February. Gasoline stocks were 52,410,000 barrels March 31.

Kerosene production in March increased 349,000 barrels and stocks gained 98,000 barrels.

Gas and fuel oil output gained 2,192,000 barrels in March and stocks gained 462,000 barrels.

Lubricants' output gained 409,000 barrels and stocks fell off 326,000 barrels.

Navy Asks Bids On Oil For Pacific Coast

By Special Correspondent

WASHINGTON, May 2.—The navy department has asked for bids covering its west coast gasoline and fuel oil requirements, July 1, 1927 to June 30, 1928, which will be opened by the Bureau of Supplies and Accounts on May 18. The department estimates its need for grade C motor gasoline at 4,116,100 gallons, 916,000 for delivery at points in Washington, 21,900 gallons in Oregon, 2,845,500 in California and 332,200 at Pearl Harbor.

Bidders are also asked to make tenders for supplying 1,480,000 gallons of grade B aviation gasoline, 1,300,000 gallons to be delivered at California stations, 40,000 gallons in Washington and 140,000 at Pearl Harbor.

Approximately 6,312,600 barrels of bunker C oil will be needed, delivery to be made, 271,000 barrels in Washington stations, 41,600 at Oregon points, 5,160,000 in California and 840,000 at Pearl Harbor, Honolulu and Cavite.

Bids have also been asked for 161,500 barrels of Diesel engine oil, 2650 barrels to be delivered in Washington, 107,000 in California and 51,000 barrels at Pearl Harbor, Honolulu and Cavite.

Gasoline specifications and delivery points are shown in schedule No. 7133 and fuel oil in schedule No. 7130 which may be obtained from the Bureau of Supplies and Accounts, Washington, D. C.

Panhandle Gets Biggest Well

Staff Telegram

TULSA, May 3.—The largest well in the Panhandle district of Texas from the standpoint of initial flow was that completed Sunday by the McIlroy Oil Co. This well, No. 2 Cockrell, is in section 4, block B-3, D. & S. E. survey, Hutchinson county. It flowed at the rate of 630 barrels an hour with 75 pounds back pressure on the gas trap. Pay was found from 2922 to 2925 feet. The well is in proven territory.

Eastern Refiners Study Better Methods Of Operating, Accounting, Selling

By Paul Truesdell
N. P. N. Staff Writer

CAMBRIDGE SPRINGS, PA., April 29 THE position of the refiners of Pennsylvania crude was studied, discussed and analyzed from four standpoints at the spring meeting of the National Petroleum Association which ended here today. The four standpoints, broadly, were:

Reducing operating costs.

Accurate determination of operating costs.

More intelligent methods of marketing products.

More attention to the fire hazard problem.

That interest in these subjects is growing keener among the Pennsylvania, West Virginia and Ohio refiners, was shown by the fact that this was the largest spring meeting in the history of the association. E. W. Smiley of the Superior Oil Works, who always attends to registering the visitors, reported 143 registrations. The largest previous registration Mr. Smiley could remember was that of last spring when it reached an even hundred.

To take the four major subjects discussed in the order in which they were named above, reducing refinery operating costs was discussed under three heads, namely, improvement in still practice to reduce, possibly by as much as two-thirds, the amount of coal burned under stills; wider use of the principle of heat exchange by the use of heat exchangers on stills; possibilities of installing turbo-generator sets in individual refineries as a means of reducing power costs as compared with buying electric power from the central station. H. A. Ross, combustion engineer with H. S. Bell, discussed fuel saving under stills, Howard H. Greene, Kendall Refining Co., Bradford, heat exchange, and J. B. Northrop, Ohio Valley Refining Co., St. Marys, W. Va., refinery generating plants.

ACCURATE determination of refining costs was covered by Paul C. Girard in a paper on "Refinery Cost Accounting," in which the speaker described in detail the accounting system used by his company, the Marland Refining Co. This paper, which was published in the April 27 issue of National Petroleum News, aroused much interest and discussion.

Mr. Girard pointed out that, while accurate cost accounting in itself cannot reduce refining costs, it can and does show up the weak spots so that these can be remedied and costs accordingly brought down. He said that per barrel costs of refining crude in the Marland plant have actually been considerably reduced since the system he described has been in operation.

The Marland system is equally adapted to the use of a small refinery by simply cutting out the unnecessary departments, Mr. Girard said.

The study of better marketing covered a wide scope, ranging from standardization of products and testing methods, more accurate testing and better ethics between buyer and seller, up to the proposal that the association or some outside agency take over the gathering of statistics for weekly distribution to members on output, shipments, and stocks of products.

There was considerable discussion of the proposal to gather statistics and a committee was appointed to consider it and report back to the association as soon as possible. This committee consists of Howard H. Greene, Harry W. Schmidt, United Refining Co., Warren, and P. S. Tarbox, Independent Refining Co., Oil City.

FIRE Prevention was discussed in a paper by Harry E. Newell, engineer of the National Board of Fire Underwriters, which is published on page 91 of this issue and a talk by James H. Herbert, assistant superintendent of the Conewango Refining Co., Warren, president of the Fire Marshals Association. Mr. Herbert spoke on the work of the fire marshals of the Warren group.

The meeting opened Thursday morning, April 28. President Keeney, in the opening address, pointed out the forward steps the association is taking and the general subject, "Progress of Fire Prevention in the Oil Industry" was taken up. Mr. Newell delivered his paper, the chief point of which was that more study is needed to determine more accurately the causes of fires in the industry. He discussed the use of lightning prevention systems that have been developed and stressed the value of tight, all steel tankage as a fire prevention measure.

Mr. Herbert, in his informal talk on the work of the fire marshals said the subject might be handled from a movie standpoint, the villain throwing a cigarette butt into a pile of rubbish, the fire starting, growing and spreading, the fire marshal as the hero, leaping from blazing tank to blazing tank, the flames raging around him. However, he said he preferred to talk about it in a nonsensational style. The fire marshals of the refineries in the Warren group meet on Saturday afternoons and visit one of the refineries.

They go over this plant with a fine tooth comb, making careful note of all they see. Then they have a meeting, talk over conditions in the plant and take a vote as to the fire hazards. When there is a disagreement the question is voted on and every condition which a majority of the marshals consider a fire hazard is reported promptly to the manager of the refinery.

MR. HERBERT said that the refinery fire marshals in the other districts, Oil City, Pittsburgh, Bradford are getting organized also into active, working organizations. Houston Dunn, secretary-treasurer of the National Petroleum Mutual Fire Insurance Co. read a paper entitled, "Do You Make Contracts?" in which he pointed out some of the details of fire insurance policies that are frequently overlooked by the insured.

Dr. H. C. Dickinson, head of the heat and power division of the Bureau of Standards, followed Mr. Dunn on the program. His subject was "The Bureau of Standards and the Oil Industry." He told of the work the bureau has done and is doing in working out test methods and calibrating testing instruments and then he went on to tell some of the things the bureau scientists have found out.

He told briefly of the cooperative motor fuel tests that were carried on for three or four years by the Bureau of Standards under the joint auspices of the Society of Automotive Engineers, the National Automobile Chamber of Commerce and the American Petroleum Institute.

These tests were run with four grades of fuel, ranging from very volatile to a heavier gasoline than any that is generally sold to the public. The tests showed, he said, that the difference in mileage obtained from the four fuels under all conditions, winter and summer was so small as not to be considerable. Starting, of course, was harder with the heavier grades.

DR. DICKINSON stated that the bureau is doing some work on pour test and has discovered that the pour test of an oil has no relation to the likelihood of burning out a bearing when starting an engine cold with that oil. He said also that some ideas on crankcase dilution have been modified in recent years, it having been found that oil in the engine reaches its maximum dilution after 250 or 300 miles of driving and then remains in that condition indefinitely. He stated also that none of the many "gasoline tonics"

which have been examined by the bureau had any merit. He was careful to except tetraethyl lead, iron carbonyl and such recognized anti-knock substances.

A. W. Scott, Empire Oil Works, Oil City, the trustee of the association in charge of the department of standards and tests, told what is being done by that department to bring about more accurate testing in the laboratories of the association refineries and make the results obtained by the different testers more nearly uniform.

MacLean Houston, United Refining Co., Warren, discussing the pour test problem, told about a method he has devised for making the pour test.

V. I. Downey, National Refining Co., Cleveland, presented a paper, "What Actually Constitutes a Flash," in which he described the different ideas and different methods of various testers in making flash tests.

The Thursday afternoon session was presided over by E. M. Lyons, Tiona Refining Co., Clarendon, trustee in charge of the department of trade and commerce. The first paper read, "Standardization of Cylinder Stocks," was prepared by J. B. Fisher, Kendall Refining Co., Bradford, and was read by Howard H. Greene in his absence. The author pointed out the varying characteristics of stocks made by different refineries from the same crude to meet the same specifications.

THEN Mr. Lyons presented the subject of collecting statistics of output, shipments and stocks previously referred to, as a guide to members in regulating their refining and marketing operations. Warren C. Platt, editor of NATIONAL PETROLEUM NEWS, talked on "The Collection and Use of Price Statistics."

Mr. Platt told of the experience of the western refiners in collecting statistics weekly on the operations of members, which work is carried on by NATIONAL PETROLEUM NEWS, how the weekly runs of crude to stills was very responsive to the condition of stocks as shown in the previous weekly report and how the western refiners are turning to a policy of fighting for a good price for their products instead of basing their ideas of successful selling merely on gallonage.

Herbert G. Eaton, Mutual Refining Co., Warren; Harry W. Schmidt, United Refining Co., Warren and Frank Berry, James B. Berry's Sons Co., Oil City, all discussed better trade practices and marketing ethics. Mr. Berry's paper is published elsewhere in this issue. Thursday evening the Fellowship supper was held. It is enough to say of this that it was scheduled on the program as an affair of "good fellowship, good entertainment, no speeches." It was.

The morning session today was devoted to manufacturing. Herbert A. Ross, combustion engineer, discussed "The 1927 Cooperative Engineering Program in Operation." This paper was published in April 27 issue of NATIONAL PETROLEUM NEWS.

Mr. Greene presented his paper on "Heat Exchange in Refineries and Conservation of Water;" Mr. Northrop of the Ohio Valley Refining Co., St. Marys, W. Va., talked on the possibilities of the electric generating plant for the individual refinery. Mr. Northrop's paper is published elsewhere in this issue. It aroused much interest but there was much difference of opinion among engineers who heard it as to the costs of equipment as estimated by Mr. Northrop.

Dr. Gustav Egloff, Universal Oil Products Co., Chicago, read a paper, "Anti-Knock Properties of Motor Fuels," and Mr. Girard read his paper on refinery accounting. This afternoon's session was devoted to traffic matters, these being reported on by Willis Crane, traffic attorney of the association.

Name Committees to Take Charge Of Anniversary Meeting

Staff Special

CAMBRIDGE SPRINGS, PA., April 29.—Committees to have charge of the 25th anniversary meeting of the National Petroleum Association, to be held in Atlantic City next fall, were appointed during the spring meeting of the association which ended here today. The date of the fall meeting is Sept. 14, 15 and 16.

E. M. Lyons, Tiona Refining Co., Clarendon, Pa., and trustee in charge of the department of trade and commerce of the association, is general chairman and President O. P. Keeney of the association is ex-officio a member of all committees. The membership of the committees is as follows:

History—George P. Brockway, Seneca Oil Works, Warren, Pa., chairman; Judge C. D. Chamberlin; A. L. Confer, Empire Oil Works, Reno, Pa.; J. A. Fawcett, Crystal Oil Works, Oil City; William H. Fehsenfeld, Red C Oil Co., Baltimore; Frank B. Fretter, National Refining Co., Cleveland; William Muir; W. E. Wall of Wall & Steigerwald, Cleveland, O.

Attendance and Publicity—Howard H. Greene, Kendall Refining Co., Bradford, chairman; Louis Carruth, Canfield Oil Co., Cleveland; Sheldon Clark, Sinclair Refining Co., Chicago; John S. Cordell, Cities Service Refining Co., Boston; Thomas J. Hilliard, Waverly Oil Works, Pittsburgh; William A. McCafferty, Emery Manufacturing Co., Bradford; Samuel Messer, James B. Berry's Sons Co., Oil City; Harry R. Lewis, Conewango Refining Co., Warren, Pa.; H. F. Fuller; G. G. Woodruff, Roxana Petroleum Corp., St. Louis; P. M. Miskell, Empire Refineries Inc., Tulsa; B. W. Browne, Great Western Oil Co., Cleveland; G. C. Davison, Tri-State Refining Co., Kenova, W. Va.; T. A. Anderton, Continental Refining Co., Oil City; J. E. Miller; J. P. Flynn, Ohio Valley Refining Co., St. Marys W. Va.; John A. Beck, Pennsylvania Refining Co., Karns City; and Messrs. Boler, Murphy, McCammon, Grant, Gustafson, Leroux, Houseman, William Schwartz, Fred Eaton, Heilman, Hawkey and F. von Tacky.

Finance—Otto Koch, Kendall Refining Co., chairman; Harry A. Logan, United Refining Co. Warren; C. L. Suhr, Pennzoil Co., Oil City; A. C. Woodman, Acewood Petroleum Co., Philadelphia; Guy Hunter, Emlenton Refining Co., Emlenton.

Banquet and Entertainment—S. P. Worthington, chairman; R. A. Wotowitch, Henry L. Doherty & Co.; Fred G. Clark, Fred G. Clark Co., Cleveland; L. C. Jamieson, Viking Oil Corp., Clarendon; Mr. Longshore.

Program—P. S. Tarbox, chairman; A. W. Scott; James Lewis; Percy Craig; G. C. Davison, M. F. Cowden; J. Howard Pew, Messrs. Moore, Hart and Fritts.

Mecca Refinery is Bought By White Oak Ref. Co.

Staff Special

TULSA, May 2.—W. M. Welch and associates who recently organized the White Oak Refining Co., have bought the refinery at Allen, Okla., formerly owned by the Mecca Refining Co. Purchase was made from the North American Car Corp.

Modern bubble towers will be installed and the plant made ready for operations by about June 1. A four-inch pipe line is to be laid to the Seminole field, about 23 miles away. The plant will have a capacity of about 2,000 barrels per day when remodeled. R. L. Walde, formerly superintendent for the Interocean Refining Co. at Bristow, will be in charge of refining operations at Allen.

Mr. Welch left here today for Coutts, Alberta, Canada, where the Beaver Refining Co. Ltd., in which he is interested also is installing a unit of the Leamon cracking process in connection with the Maple Leaf Refining Co. plant.

Mercer Widens Buying Scope

TULSA, May 2.—C. Fred Mercer, buyer of refined products for resale in tank car lots, has moved his offices from Wichita Falls to Tulsa. His present offices are at 509 World building. Mr. Mercer has specialized in buying in north Texas fields in the past but proposes to enlarge his activities to include Oklahoma and Kansas with his more central offices.

Expansion of Sound Fuel Oil Market Offered as Relief Measure

NEW YORK, April 28

EXPANSION, by the oil industry of the economically sound market for fuel oil is a means of relief from the present low crude oil market. The Lamp, official organ of the Standard Oil Co. of New Jersey, points out in an article in its April issue, entitled "An Opportunity in the Industry's Present Problem."

Because of the extent to which fuel oil is now used in cracking into gasoline, the value of fuel oil today is the foundation of the petroleum price structure, the Lamp says.

"Through the price of gasoline, fuel oil controls the value of crude oils other than the grades utilized for the manufacture of lubricants and specialties," it argues. "The present crude oil price schedule is on a fuel oil basis, competitive with coal, and, if further declines in crude prices occur, fuel oil will be competing only with itself."

The remedy in the situation, the Lamp points out, lies in the oil industry making a determined effort to place fuel oil on the plane to which it is entitled by its economic value, not to so great an extent competitive with coal as at present.

"Such markets are susceptible of great expansion, with the present assurance that supplies will be available over a long period at a present price," it is said. The article concludes with the following program for the industry to follow:

"A wholesome ambition would be to effect the utmost economies of operation in every phase of the business, to recognize that the development of new sources of crude for a considerable time promises to be hurtful, and more nearly to bring about an equilibrium between production and consumption by means which will inflict the minimum of injury or loss to any unit. There are complexities in the present outlook which are new, but there are also compensating opportunities for greater efficiency and the ultimate prosperity of the industry, which are now only being recognized."

The article, aside from the above concluding paragraph, follows:

"As compared with the brief periods of flush production of the past which have been terminated by low prices, the industry faces today an era of overproduction that promises to be of extended duration. Low prices are still the effective remedy, but the existence of a crude price below cost over a long period would bring disaster to many in the industry. The conception of a crude situation of relative sufficiency is based not alone upon the uninterrupted activity of drilling operations with increasing production of crude, and the fact that the crude now above ground and to be produced represents by reason of improved refining methods a substantially greater yield of gasoline than ever before, but also upon the existence of known, but as yet undeveloped, reserves of crude. Never in its history has the industry possessed in addition to the huge stocks above ground, undeveloped known reserves of such magnitude, and the existence of these reserves gives to the present period its certainty of extended duration in contrast with the brief and spasmodic intervals of overproduction in the past.

"Substantial reductions in prices have occurred, affecting in different degree the several classes of crude. In the following table of three classifications, fuel, lubricating and gasoline crudes, it will be seen that the gasoline crudes have borne the brunt of the declines.

Classification of Crudes	Daily Production April 1	Avg. Price Oct. 31	Avg. Price April 1	Percent. Avg. Reduction
Fuel Crudes..	313,058	$1.07	$ .95	10.25
Lub. Crudes..	231,834	2.13	1.72	19.18
Gas. Crudes..	1,932,525	2.13	1.21	43.39
Total U. S....	2,477,417	$2.00	$1.22	38.78

"During the past few years the supply of motor fuel has been derived principally from two sources, the distillation of crude and the cracking of fuel oil. The cost of gasoline distilled from crude has been greater than the cost of gasoline produced by cracking fuel oil, and as a result there has been an enormous expansion of cracking facilities. The recent reductions in crude oil prices have in effect been an adjustment toward parity of the relative values of crude and fuel oils for gasoline manufacture. If the production of naphtha-bearing crudes were more than sufficient to supply the entire demand, the value of the natural gasoline might decline to a level below the cost of obtaining gasoline by cracking fuel oil. This would cause a virtual suspension of cracking operations. In such a situation, however, gasoline obtained by natural distillation would no longer be in competition with cracked gasoline, which has been the cheapest source of supply, but solely in competition with itself.

"A pertinent question is, therefore, whether on the basis of today's production of naphtha-bearing crudes there can be recovered sufficient natural gasoline to supply the total demand, estimated at 342,000,000 barrels for 1927, or an increase of 9.6 per cent over 1926. This additional quantity of approximately 30,000,000 barrels could be more than supplied from the increase in production of crude oil which present estimates place at 125,000,000 barrels. If this additional quantity of crude oil is run it will give, on the basis of a 30 per cent yield, 37,500,000 barrels of gasoline, or 7,500,000 barrels in excess of the estimated gain in demand. The production of gasoline by cracking during 1926 was 93,736,000 barrels, so that to meet this year's demand the industry would still be obliged to produce by cracking about 86,000,000 barrels. There exists, therefore, no economic reason why the cost of the natural gasoline content of the crude should decline to a price below the cost of gasoline obtained by cracking fuel oil.

"The cost of cracked gasoline is determined by the price of fuel oil, therefore, the value of fuel oil is today the foundation of the petroleum price structure. Through the price of gasoline, fuel oil controls the value of crude oils other than the grades utilized for the manufacture of lubricants and specialties. The present crude oil price schedule is on a fuel oil basis, competitive with coal, and, if further declines in crude prices occur, fuel oil will be competing only with itself.

"Another pertinent question is whether now, and in the past the industry has not ignored certain economic factors bearing on the fuel oil market. Statistics show that the domestic consumption of coal on a heat value basis is approximately five times the consumption of fuel oil. Further, today's price of fuel oil in most parts of the country is below its equivalent value as compared with coal for power purposes. These conditions alone should cause a substantial increase in the consumption of fuel oil at existing price levels.

"Competition with coal for power purposes is, however, of minor consideration in any constructive program for the expansion of the fuel oil market. Since the present overproduction has established the industry's price structure on the value of fuel oil, is it not time to stop looking at fuel oil as an unwelcome byproduct? Should not the industry, recognizing its importance in the price structure, now make an effort to place fuel oil on the plane to which it is entitled by its economic value? The higher the plane on which the industry places fuel oil, the higher the value for crude and its products.

"The consumption of distillate oils in the direct generation of power, such as in Diesel engines, or for domestic heating and like purposes, gives it a special value not competitive with coal. With the assurance that supplies will be available over a long period at a reasonable price, these markets are susceptible of large expansion. Their rapid development is important not only to provide an outlet for surplus production, but

also in reduction of the present large stocks above ground. The industry is justified in allocating a part of its supplies to these superior uses and should be willing to enter into contracts for delivery over longer periods than heretofore.

"Once the industry itself recognizes that there will always be a production of fuel oil, the status of that product will be immediately changed. It should come into general use for superior purposes, at a price which will be profitable, and which will exert a favorable influence upon the value of crude and its products.

"Prices of crude will continue to be determined by competition and the law of supply and demand. These two forces will be interpreted by crude purchasing companies according to their own views on current production, pressure of current stocks, prospects of shortage or surplus, consumption of products, conditions of general business, etc. If, in the judgment of some or all of these companies the storage of crude at existing price levels is not justified, further declines in price will follow.

"The present situation is the more serious if it fails to enlist the intelligent and cooperative effort of every unit of the industry. The present cycle of overproduction differs from those that have gone before in that its duration for a much longer period than any of its predecessors is almost certain. Measures to meet that condition must be framed with due consideration to this fact, and to the futility of applying to a new and unprecedented situation only the remedy that proved availing under a different set of conditions in the past."

Georgia Independents Organize

ATLANTA, GA., April 30.—An organization of Georgia oil men has been formed as the Georgia Independent Oil Marketers Association, with headquarters here. A meeting was held on March 24 and 25 at which time officers were elected.

Another meeting will be held in Atlanta on May 10, particularly for the purpose of discussing legislation which the association is considering seeking.

The next regular meeting will probably be held at Macon within two or three months, the exact date not having been set yet, according to J. K. Ezell, secretary and treasurer. Mr. Ezell is representative of The American Oil Pump & Tank Co. here.

Los Angeles Water Shipments

LOS ANGELES, April 29.—Shipments of petroleum products out of Los Angeles Harbor week ending April 23 to points outside of Pacific Coast trade territory averaged 163,711 barrels, practically the same as previous week, but below first two weeks in April.

Pacific foreign drew 63,688 barrels of crude, 66,000 barrels of fuel, 64,752 barrels of gasoline and 95,597 barrels of kerosene. Shipments to Atlantic domestic included 205,459 barrels of fuel and 93,334 barrels of gas oil. Atlantic foreign drew 495,484 barrels of fuel and 61,666 barrels of gasoline.

Cleaning Out Wells is Next Topic of Uren

THE next article in the series on Improved Production Methods which Lester C. Uren, recognized authority on production engineering, is writing exclusively for NATIONAL PETROLEUM NEWS, will be on the best known practice for cleaning and reconditioning wells. He will take up methods for keeping wells free from paraffin accumulation and other deposits. This article will appear in NATIONAL PETROLEUM NEWS, May 11th issue.

Other topics having to do with new practices in oil production will appear in later articles, which will appear in this publication through the year. Through the Uren articles, the practical oil man, busy with his every day work, can keep posted on new developments that may affect oil production methods, as they come to light, whether in the field of engineering or chemical research, or in actual oil field experimental work.

Production of Seal Beach Field Tops 50,000 Barrel Mark

LOS ANGELES, April 30

SEAL BEACH field the past week showed an increase in daily production of about 13,500 barrels, with daily production today exceeding 53,000 barrels for the entire field. The average for the week was about 50,000 barrels.

More than 130 wells are drilling at various stages, and 20 wells are expected to be completed next week. Completions in the Alamitos Heights town lot area are coming in with flush production exceeding 2500 barrels, beaned down. Gas pressure is very strong and the gas has a gasoline content of about four gallons to the thousand feet, much richer than in other Los Angeles Basin fields.

Four pipe lines are connected with the townlot area, but so far the Standard of California has not agreed to take any oil. The Pan American is running the oil from the new Barneson well. Geo. Getty has a new well on production and, since he has an 80,000 barrel steel tank empty at Santa Fe Springs and as he is building two 55,000 barrel tanks, he will be able to take care of his production, moving his oil from the field to Santa Fe Springs in tank cars.

Pan American and General Petroleum have pipe line facilities for moving their oil. California Eastern (formerly Julian Petroleum) has a line at the edge of the town lot area, which has been serving Huntington Beach, and can tie in when necessary. Richfield Oil also has a line to the West end of Seal Beach and the Union Oil is just this week completing a line into the field. The Seal Beach oil will be moved, but there is a bare possibility that the price of crude in this field will be cut or runs prorated. There is also a possibility the Standard will agree to take the oil from the wells, paying for a part of it, and storing the remainder for future disposal.

Ventura Avenue also jumped in production during the past week with the completion of five new wells with a total flush production of about 8000 barrels. After taking care of decline in the older wells, the field's daily production increased to about 54,000 barrels. At Ventura, 13 wells are drilling below 5000 feet, with 4 wells drilling between 4000 and 5000 feet. Thirty-five other wells are drilling in this field at various other depths.

A late check of shut-in production in the state gives a total of 66,000 barrels, and reports are current that other production is shut in, but not in very large quantities.

Seal Beach Gasoline Plant to Start Up Soon

LOS ANGELES, April 30.—The General Petroleum Corp. expects to start operations at its new natural gasoline plant at Seal Beach, in the Alamitos Heights area, about May 10. The plant will have a capacity of about 25,000 gallons a day and consists of two complete J. A. Campbell units. There are two oil froth absorbers, each with a daily capacity of 6,000,000 cubic feet of gas.

The Petroleum Securities Co., (Doheny organization) during April placed an order with J. A. Campbell for an additional oil froth absorber, which will double the capacity of the company's Seal Beach plant.

Humble Running Panhandle Oil

HOUSTON, May 2.—Humble Pipe Line Co., April 30 began running oil through its new 396-mile 10-inch pipe line from the Texas Panhandle to connection with its previously existing trunk system at Comy, Comanche county. This is the second main line outlet from Panhandle, as the Gulf and Magnolia companies started running oil about two weeks ago through their connecting systems.

Gasoline Shipments from Western Plants Above Consumption in Mid-West

By J. C. Chatfield
N. P. N. Staff Writer

TULSA, May 2

THE largely increased shipments of gasoline from Mid-Continent refineries since Jan. 1 have not been matched by a corresponding increase in ultimate consumption in the normal trade territory of the group.

Figures showing this have just been compiled by H. K. Davis, statistician of the Western Petroleum Refiners Association, and published in the current association bulletin.

Eleven important consuming states in the middle west to which the bulk of Oklahoma and Kansas gasoline is shipped, showed an increase in consumption of only 3.3 per cent in January as compared with the same month in 1926. In February the increase in consumption was 8.9 per cent and for the two months combined the increase was only 5.9 per cent as compared with the corresponding two months a year ago.

Figures on which consumption was estimated were state inspection and gasoline tax reports as gathered by the American Petroleum Institute. The states included were Indiana, Kansas, Minnesota, Missouri, North Dakota, Oklahoma, South Dakota, Iowa, Michigan, Nebraska and Wisconsin. No state figures are available in Illinois.

U. S. Bureau of Mines reports covering operations of refineries in Oklahoma and Kansas showed an increase in shipments of gasoline during January of 11.7 per cent and in February of 16.1 per cent. For the two months the increase in shipments was 13.8 per cent over the same two months a year ago.

The 124 plants which report on their operations to National Petroleum News each week showed even larger gains in business than all plants in the two states. For January the weekly reports indicated an increase of 24.2 per cent and for February of 13.0 per cent. For the two months the increase was 18.7 per cent as compared with an increase of 13.8 per cent for all plants in the two states.

Since those plants reporting to National Petroleum News embrace very largely the refineries doing business on the spot market, while many of the plants not reporting weekly distribute most of their gasoline through their own stations or on contract, it may be assumed that the increase in shipments has been due to an effort on the part of those refiners depending on the spot market to enlarge their trade territory.

REFINERS in Oklahoma and Kansas have been pushing gasoline in much larger quantities into Ohio, western New York, and adjacent territory since Jan. 1 than at any time during the past two years. With threatening crude markets and an excess of crude being produced, refiners have reached out for broader markets.

Export demand from the Oklahoma and Kansas plants was fairly good during January and February but general opinion is that the large percentage increases were not caused by foreign demand. The bulk of the export gasoline bought from inland Mid-Continent plants comes from north Texas refiners because of the more advantageous freight rates to the Gulf from that section.

An indication that the larger shipments from Oklahoma and Kansas plants are based on an enlarged marketing area is seen in the U. S. Bureau of Mines figures for the country as a whole.

In January, domestic demand as indicated by refinery shipments less exports, showed an increase over the previous January of only 1.7 per cent. In February the increase was 15.3 per cent and for the two months combined, 8.2 per cent over the first two months of 1926.

In Table No. 1 shipments of gasoline from Oklahoma and Kansas refineries reporting to National Petroleum News are shown for the first 16 weeks of 1927 as compared with the first 16 weeks of 1926. This table shows that the percentage of increase over 1926 has been declining steadily during recent weeks until it is now down to 15.2 per cent at the close of the 16-week period.

This tabulation would indicate that the Oklahoma and Kansas group began pushing for business and making prices

(Continued on page 36)

Table No. 1

Gasoline Shipments from Oklahoma-Kansas Plants Reporting to National Petroleum News.

——YEAR 1926——

	Oklahoma (Gallons)	Kansas (Gallons)	Total Oklahoma and Kansas
1st 5 wks.	51,257,282	35,909,006	87,166,288
1st 6 wks.	64,113,724	43,689,098	107,802,822
1st 7 wks.	76,053,050	49,878,612	125,931,662
1st 8 wks.	87,139,258	56,122,709	143,261,967
1st 9 wks.	99,065,676	62,756,857	161,822,533
1st 10 wks.	114,240,969	70,102,855	184,343,824
1st 11 wks.	127,875,736	76,785,725	204,661,461
1st 12 wks.	141,959,753	85,072,403	227,032,156
1st 13 wks.	157,670,281	92,664,342	250,334,623
1st 14 wks.	169,607,697	100,989,872	270,597,569
1st 15 wks.	184,526,916	108,642,072	293,168,988
1st 16 wks.	198,805,061	116,855,728	315,660,789

——YEAR 1927——

	Oklahoma (Gallons)	Kansas (Gallons)	Total Oklahoma and Kansas
1st 5 wks.	67,808,880	39,883,111	107,691,991
1st 6 wks.	80,404,890	47,058,407	127,463,297
1st 7 wks.	92,790,321	56,765,840	149,556,161
1st 8 wks.	107,622,068	63,702,795	171,324,863
1st 9 wks.	123,112,815	72,449,142	195,561,957
1st 10 wks.	137,411,657	80,484,218	217,895,875
1st 11 wks.	153,184,386	88,003,617	241,188,003
1st 12 wks.	168,585,973	96,373,458	264,959,431
1st 13 wks.	187,571,473	104,886,212	292,457,685
1st 14 wks.	204,149,934	113,597,412	317,747,346
1st 15 wks.	220,944,290	120,351,082	341,295,372
1st 16 wks.	236,403,103	127,178,644	363,583,747

Percentage Increase, 1927 over 1926

	Oklahoma	Kansas	Total Oklahoma and Kansas
1st 5 wks.	32.3%	11.1%	23.5%
1st 6 wks.	25.4	7.7	18.2
1st 7 wks.	22.0	13.8	18.8
1st 8 wks.	23.5	13.5	19.6
1st 9 wks.	24.3	15.4	20.8
1st 10 wks.	20.3	14.8	18.2
1st 11 wks.	19.8	14.6	17.8
1st 12 wks.	18.8	13.3	16.7
1st 13 wks.	19.0	13.2	16.8
1st 14 wks.	20.4	12.5	17.4
1st 15 wks.	19.7	10.8	16.4
1st 16 wks.	18.9	8.8	15.2

Warns Co-ops May Not Thrive When Gasoline Margin Shrinks

CLEVELAND, May 2

THE golden days of wide margins for the marketer may not last long and farmers and others who figure on going into co-operative oil marketing companies will do well to take account of this fact. That is the warning sent out in an open letter by the Wisconsin department of markets, Madison, Wisconsin, which has busied itself considerably with regulating the oil business in that state.

It has not, so far as we know, promoted or encouraged any farmers' co-operative oil companies. The letter states that the department is now studying the question. The open letter follows:

"Although the retail price of gasoline is now 3 cents below the summer price of 1926, the margin between retail prices and wholesale costs has been on an almost continual up-trend for the past 15 months. The spread between the service station price and the cost in tank cars at Milwaukee averaged 8¼ cents for the month of April whereas 6 cents not long ago used to be considered sufficient margin for a local oil company to work on. The April average is the highest retail margin of any month in 10 years, except for July 1923 when a 10 cent margin obtained for a few weeks just before the cut of 6½ cents in retail prices. Except where local price-cutting has occurred, the margin has now been above 6 cents for 14 months, and has averaged over 7½ cents for a year.

"Low test gasoline is 1 cent cheaper than a year ago and is of higher gravity. Probably it will be sold through the coming summer 3 cents or 4 cents cheaper than last summer. The reason for this is a demoralized refinery market due to a tremendous over supply of crude oil. Crude oil prices have fallen $1 a barrel, or 44 per cent in six months, and the Oklahoma refinery price of gasoline is 5½ cents a gallon, or 46 per cent, below the 1926 peak in June. But the large integrated companies in this territory seem to be trying to make up through their marketing companies what they are losing in the producing and refining end. Retail prices have not been reduced to correspond to the wholesale reductions.

"LARGE buyers in the retail markets are given substantial discounts from the regular prices, but these benefit a very small proportion of the consuming public. The individual car owner does not benefit at all from these rebates, except where independent station or pump operators pass along the rebates in lower pump prices to all customers. On the contrary, these rebates appear to be intended to stave off a general competitive reduction of the retail price, through making concessions to the limited number of large users whose bargaining power amounts to something in the retail oil market. A spread of 4 cents between tank wagon and tank car prices, delivered, was considered a fair working margin only two years ago: but now the largest tank wagon customers get a 3 cent rebate from the tank wagon price. Two cents used to be the spread for operating pumps and filling stations, but service station customers taking 200 gallons a month now receive this much as a rebate from the regular price. This rebated business may not pay its share of the oil companies' expense, but it probably makes up for this by "stabilizing" the regular prices charged to individual car owners, who make up the bulk of all the oil business.

"Two important results are following this long period of high marketing margins. Attempts of local oil dealers to break away from the so-called normal prices established by Standard Oil very often result in putting the price down locally not only to a fair level, but below it, so that business is done at a loss in those places. Such conditions threaten the livelihood of the local oil companies far more than the integrated companies which market their products over a wide area. As a result the Independent oil companies in many places are seeking new legislation to revise the old anti-discrimination laws and adapt them to present competitive conditions. Bills have been introduced this year in at least seven states bearing on this question, and in two states the attempt is being made to place the oil business under state regulation as a public utility.

"THE second result of wide retail margins is that farmers are finding a golden opportunity, temporarily at least, for distributing petroleum products locally through their own co-operative organizations. Oil inspection department figures published recently in the NATIONAL PETROLEUM NEWS, an authoritative journal of the oil trade, show that in 46 Minnesota towns where co-operative oil companies compete with Standard Oil or other private companies, the co-operatives are doing 35 per cent of the business, and not all of the co-operatives had operated the full year. The average co-operative bulk plant received 212,000 gallons of gasoline and kerosene in 1926, as against an average of 169,000 gallons per plant for the companies operated for private profit. In twenty-six of the forty-eight towns the co-operative company had the largest gallonage.

"NATIONAL PETROLEUM NEWS has also published financial statements of two of the most successful of these oil co-operatives. One of these shows a net profit of $37,000 earned in 1926 on total assets of $78,000, and capital stock and surplus at the beginning of the year of not more than $33,000. The other co-operative reports a net profit of $30,000 on capital and surplus at beginning of the year of not more than $26,000, with total assets of $72,000. Dividends of 7½ per cent appear to have been paid on the stock, and patronage dividends of 12 per cent to 15 per cent on sales. In an article accompanying these figures, the editor states that the experience of the Minnesota oil co-operatives "has not shown them the profits that were anticipated." The profits shown above of more than 100 per cent on owners' equity at the beginning of the year are undoubtedly very attractive to the farm groups operating these companies.

"The department is making a study of co-operative oil companies for the information of those who may plan to enter this field. Warning must be given, however, that the opportunity may not continue as favorable as at present. Margins in 1925 were only 70 per cent of the recent averages, and closer prices may return even before the end of the present year."

California Gasoline Consumption Gains

LOS ANGELES, April 30—Indicated consumption of gasoline in California and within Pacific Coast trade territory during March was 82,581 barrels, daily average, or a total of 2,490,012 barrels for the month. This against a daily average of 79,659 barrels in February, 61,244 barrels in January and 89,824 barrels last December.

These figures are secured by using figures compiled by the San Francisco office of the Bureau of Mines. For instance, during March, total production of gasoline was 4,727,350 barrels. Shipments outside of trade territory totaled 1,741,240 barrels, with 496,098 barrels added to present California storage.

During March, 49 refineries operated in California at 72.3 per cent capacity, running to stills a daily average of 566,803 barrels of crude. The same month 149 natural gasoline plants reported a recovery of 983,712 barrels of natural gasoline from 29,264,487,000 cubic feet of gas. Stocks of natural gasoline on hand represent 20 days supply.

California refineries cracked at the rate of 12,007 barrels, daily of cracked gasoline during last month.

CHICAGO, April 30.—Employes in the Chicago office of the Henry H. Cross Co., carload marketers, were entertained Friday evening by Henry H. Cross, president of the company, at a dinner dance at the Edgewater Beach hotel here. Approximately 60 employes and their families attended. A short address was given by Mr. Cross who has returned to the office after a year's illness.

Jenney Builds Stations to Fit New England Settings

By Roger B. Stafford
N. P. N. Staff Writer

Gas and oil station for land, water and air motor driven vehicles, built on the water front at Hingham, Mass., by the Jenney Mfg. Co., Boston

BOSTON, April 30

BEAUTY as well as utility has been built into the service stations of the Jenney Mfg. Co. of Boston throughout its New England marketing territory. In this respect this company whose present gasoline and oil business is the outgrowth of an importing enterprise established the year the United States entered a war for the freedom of the seas, 1812, stands among the foremost of distributors in this country.

The Jenney Mfg. Co. not only has sought to make its stations pretty and convenient but it has sought to make them a part of the New England landscape; each station, distinctive in architectural style, has been designed to fit snugly into its particular neighborhood. No two stations of the Jenney company are exactly alike; few possess similarity besides the embodiment of the New England Colonial style in some form in many of them.

The company in its station construction may have violated the advertising fundamental that likeness in design of stations fixes in a prospective buyer's mind the idea that a certain brand of goods may be bought at that particular station but in a community where traditions rest more solemnly than perhaps in any other part of the United States, a name that has become familiar in 115 years of business in that community probably has more weight than the repetition of architectural design and color combinations.

Living quarters for the station salesman and his family are provided at stations in several villages that lie out from Boston. This provision of a home for the station salesman in the station is unique with Jenney so far as has come to the attention of this writer.

The service station pictured on the cover of this issue of National Petroleum News was built by the Jenney company at Lynnfield, northeast of Boston on the Newburyport turnpike. It is of the cottage style of gray shingle sides and white trim. The station building with the ells is 26 by 41 feet. The salesroom is 15 feet 10 inches by 19 feet 4 inches. There are toilets for men and women, the women's being in a small ell at the right rear of the main building with the entrance shielded by a rose-covered trellis.

This is one of the few Jenney stations with a canopy, which, at this station, covers one drive. It also is one of the few with covered drain pit. The drain pit shed is open on its four sides but trellises with vines on three sides makes it appear as a summer house that might well ornament many a garden.

Tall American elms shade this station part of the day, one large tree being in a triangular green that lies between the drives and the roads on which the station site fronts. Shrubs and small evergreens also have been used to make this station a companion to the dignified old homes with which it neighbors.

The combined living and dining room to the left of the salesroom is 11 feet 10 inches by 15 feet 4 inches and the kitchen to the rear of the salesroom is 8 feet 8 inches by 13 feet. On the second floor are two good sized bedrooms and bath. The men's toilet is in the rear of the salesroom.

Brilliant lamps suspended from swanneck standards illuminate the drives. The chimney is painted white and the chimney cap is black, a combination one finds on many of the pre-revolutionary houses of New England.

The station pictured on this page is on the waterfront at Hingham, southeast of Boston. It is a land-marine station, serving both automobiles and launches. Launches are fueled through a pump at the rear. One might also call it an air, land and water station as the seaplanes that may be seen on the water beyond the right of the car at the air tower, may be fueled with little difficulty at this station.

This picture is a good example of how Jenney architects tie their stations to their environs. Note the lookout tower, the weathervane fashioned after a schooner, the porthole window above the entrance, the shell designs over the windows and the flag mast with its "OIL" and "Gas" pennants which may be read far out on the bay. The Colonial style is carried out in the windows with their blinds, the cornice, rain boxes and black capped chimney.

At Mattapan, Mass., Jenney bought an old story and a half two-gabled cottage on a lot 76-foot front with 100-foot depth. The cottage was moved back

far enough to permit a small green at the sidewalk and a drive wide enough to accomodate four cars side by side.

The cottage was 32 feet wide and 30 feet deep. The entrance was to the left and there the salesroom was installed. This room is 12 by 30 feet and is a few steps lower than the rest of the first floor of the cottage. The remainder of the first floor is used for living room and kitchen for the station salesman and his family. The bedrooms and bath are in the story above.

This building dates back more than a century but was thoroughly remodeled when acquired by the Jenney company. It has white frame sides and green blinds. The roof is of slate with the metal comb white. The roof is pierced on the front slope by two dormer windows with green blinds. The cottage's two chimneys are white with black caps.

THE pavement covers most of the front of the property and a space about 25 feet wide and 30 feet deep at the left side where the draining rack has been built. The blocks that support the steel channels of the rack have been poured with the pavement and half round curbing that borders all the drives and the small semi-circular green at the front of the lot. Flowers have been placed in boxes under the front first floor windows and elsewhere about the station lot.

"A reconstruction job is an indefinite propostion," said Charles S. Jenney, vice-president and general manager of the company and great grandson of the man that founded the Jenney importing enterprise in 1812. "This particular one cost us approximately $4,000, including moving and remodeling. The property 76 by 100 feet with granolithic (a quality grade of concrete) up to the building including the pit at the side, cost about $6,000 more. This figure, of course, could have been cut down a great deal had it been necessary."

The company's building costs vary with the type of structure and labor costs in various communities. In the stations where living quarters are provided, the total cost of the station is not charged against the gasoline and oil business as the salesmen pay $40 a month rent. This rental includes light and heat. They are heated with hot water and coal is used for fuel.

The station homes are cozy and in most cases are far better than the station salesman could afford elsewhere or in which he had been accustomed to live. They keep the salesman close to the job and he is content to spend longer hours on it. In the less busy stations he may be the only employe there but at the busier stations he may have a helper.

Early American furniture is used in the salesrooms and the interior cabinet work is in the Colonial style.

But in the congested business districts the company has had to forego beauty for strict utility. It has been impossible to obtain a site for a drive-in station

Gasoline being served from pump in recess of building through swing pipe to car at curb, at Jenney Mfg. Co. headquarters at Boston

and too expensive in the business districts of old Boston. Placing of pumps at curbs also was prohibited but the company overcame this difficulty several years ago by putting pumps inside the property line and attaching the hose to a pipe that swings from the building over the sidewalk.

AT the company's headquarters at Milk and India Sts. recesses have been cut in the walls on two frontages and pumps installed in the recesses. Cars are satisfactorily served with gasoline. Oil is also sold but crankcase service is impossible at this place and most others in congested business neighborhoods.

The swinging pipe has been adopted by other distributors in and about Boston. A line from the pump leads to a swinging joint fastened to the outside of the building just above the arch of the recess. The swing pipe is as long as the sidewalk is wide. At the free end of the pipe is a trap and nipple to which ordinary gasoline hose is attached. The free end is steadied by a cable which is fastened to the building three or four feet above the swing joint.

The Jenney company has one important side line at its stations—playing cards. An excellent grade of cards is sold at 35 cents a pack. The same cards with gold edges retail generally for about twice the price. The Jenney cards have only plain edges and on the backs are the pictures of various Jenney stations. The cards cost 45 cents a pack wholesale and the 10-cent loss the company charges to advertising. Its sale of playing cards is said to be the largest in metropolitan Boston.

Mich. Price Control Bills May Fail

CLEVELAND, May 3.—There is some doubt whether the bills amending the Michigan anti-discrimination laws and making posting of both service station and tank wagon prices of motor fuel compulsory, will be passed by the Michigan legislature which will adjourn in about two weeks.

The bills were introduced by Representative John Simpson of Jackson at the instigation of the directors of the Michigan Independent Oil Men's Association but are still in committee and may die in a pigeonhole.

One bill entitled, "To prevent unfair commercial discrimination between different localities and persons for the purpose of ruining or harming the business of a competitor," prohibits selling at a lower rate in one part of the state than in another part except for differences in quality of goods and transportation costs.

The other bill would compel prominent posting of all prices at which gasoline is sold at a pump and by tank wagon together with discounts, credits, rebates or other allowances. This measure is intended to prevent secret rebating but, according to H. H. Ragle, president of the Michigan association, would not prevent the granting of Q. D. A. if the terms and amounts of discounts were prominently posted where the motor fuel is sold. Penalties of $50 to $1,000 fine, and/or six months' to three years' imprisonment are provided in the bill as introduced.

A few distributors have opposed the bills, one of the grounds of opposition being that it would prevent a company that has distribution in several communities, from meeting cut price competition in any community without lowering its price scale throughout the state. Another objection is that such a law would compel publication of contracts between individuals or corporations.

Kansas Jobbers to Meet At Wichita May 12-13

TULSA, May 2—The annual convention of the Kansas Oil Men's Association will be held at the Broadview Hotel, Wichita, on May 12 and 13. Sessions will be held on the roof garden.

J. A. Motter, secretary of the association, has announced the following speakers for the two day meeting: Dr. Gustav Egloff of the Universal Oil Products Co., Chicago; Warren C. Platt, editor of NATIONAL PETROLEUM NEWS, Cleveland; D. W. Moffitt, vice president of the Mid-Continent Petroleum Corp., Tulsa; J. A. Gilmore, secretary of the American Oil Men's Association, Chicago; and Frank W. Lovejoy, New York.

Equipment dealers serving Kansas Oil jobbers and refiners will have booths in the hotel displaying their newest goods.

Natural Gasoline Plants Need More Accurate Pressure Control

By J. V. Thomas
Vice President, Natural Gas Equipment Co., Los Angeles
Presented at April Meeting California Natural Gasoline Association

PART 1

PRESSURE regulation has made remarkable strides toward accuracy during recent years. This subject, as an important factor in gasoline plant operation, has found its way into every department of the process and at the present time throughout the entire natural gasoline industry, accurate pressure control is recognized as essential for efficient operation.

During this development period, in which the absorption method of gasoline extraction evolved from an experiment into the present generally accepted process, many new needs for regulators were disclosed.

The old style regulators were not sufficiently sensitive to qualify and in order to satisfactorily meet the requirements, regulator manufacturers have found it necessary to incorporate new features in the design of their products.

The present high state of efficiency of this equipment is largely due to suggestions and constructive criticism offered by operating men of the natural gas and petroleum industries.

Those who have not closely followed the progress made in this field may find it rather difficult to analyze the methods of operation employed, and no doubt would be quite at a loss if for any reason it were necessary that they thoroughly understand the workings of a pilot operated regulator. The design and operation of the latest types of regulators as well as their numerous uses will be covered briefly in this paper.

THE single diaphragm type of regulator is marketed in two general classes: First, the type in which the actuating pressure is opposed by a weighted lever, and second, the type in which the actuating pressure is opposed by spring tension. Adjustments for various pressures are made either by adding or removing weights from the lever or by increasing or decreasing the spring tension by means of an adjusting nut.

When the desired working pressure can not be obtained in this manner it then becomes necessary to either change the diaphragm or spring, as the particular case requires.

It might be well here to briefly consider the relative merits of the two different classes, for each has its particular utility. The weighted regulator can be furnished at a lower cost. This feature alone recommends its use for certain services.

For example, it is common practice in the oil fields to use the weighted lever type of regulator on wells to maintain a constant casinghead pressure. Wherever a spring loaded type is installed for this service, it is usually because more accurate regulation is necessary in that particular instance. These casinghead regulators are usually for very low pressures which permits the use of large diaphragms and therefore, with the weighted type, close enough regulation can be maintained.

ON the other hand, you have all seen the weighted type of regulator become obsolete as a boiler fuel regulator. There are several reasons why the spring loaded type has succeeded the weighted type for this service. First, the heavier and faster drilling equipment now used requires immediate response from the boiler plant, therefore finer regulation is necessary.

Second, the increasing use of natural gas as an industrial fuel has made possible the sale of surplus gas, and greater regulator efficiency was demanded to prevent boilers from popping; to keep steam at the required working pressure at all times; and mainly to supply fuel in as even a flow as possible. This latter is of vital importance and yet is seldom considered. Rapid changing of firebox conditions is very inefficient and detrimental, even though the steam pressure may be held constant.

Third, the long arm on the old style of boiler regulators was a continual annoyance and too often did the fireman lend the weight of a foot to the lever arm in order to temporarily pick up steam. At such times the firebox was smothered with gas and efficiency was sacrificed.

Two instances have now been cited in which two different types of regulators are commonly used. The fundamental reasons for operators discriminating between regulators in these two cases are cost, and efficiency or accuracy. For one service, accuracy does not seem to be essential and cost is the deciding factor. For the other service, accuracy and efficiency are desired, therefore additional expense is warranted.

TO be efficient a regulator must be so designed as to be practically frictionless. It must be in perfect alignment and all change for stem binding eliminated. The valve mechanism must be as nearly balanced as is possible. For instance, there must be an even number of ports, usually two, having the same area. These ports must be so located that the difference in pressure of the fluid passing through them is exerted in opposite directions, thus balancing the effect of the pressure in the valve.

For comparison, we will analyze the effect of pressures on a single ported valve. Consider a 3-inch back pressure single ported regulator relieving fluid from 30 pounds pressure to atmosphere. The area of this 3-inch valve is 7.07 square inches. 7.07 x 30 gives a total pressure exerted in one direction of 212 pounds. This must be opposed by an equal force in the opposite direction. This force may be either spring tension or a weight arrangement.

Now, if there were a back pressure applied to the outlet side of this valve and it was desired to relieve this 30-pound fluid into a 20-pound line, the regulator would no longer operate at 30 pounds back pressure because the actual pressure exerted in one direction upon the valve would only be the difference between 20 pounds per square inch and 30 pounds per square inch or a total weight of 70.7 pounds instead of 212 pounds. The result would be that the inlet pressure which should be relieved at 30 pounds would build up to 50 pounds before the valve would open. At 50 pounds inlet pressure and 20 pounds outlet pressure, obviously there is a resultant force of 30 pounds per square inch to operate the valve. The valve is doing exactly what it did before, but the pressures are different, and the desired results are not obtained.

THE inlet pressure increased when the outlet pressure increased because of the design of the valve. It was originally built to function on the difference in pressure; that is, the difference between 30 pounds and atmosphere, and may be relied upon only when these conditions prevail.

With the two ported or four ported valve the effects of the line pressure are balanced and the forces actuating the valve are applied externally to the valve stem. It is therefore of great importance that the valve mechanism be balanced.

There are still other uses for regulators which demand even closer regulation that can be obtained with the most accurate single diaphragm type. The pilot-operated regulator has

been designed to accommodate such strenuous service.

There are several different applications of the pilot arrangement but the basic principle is the same in all cases. Any pilot-operated valve consists of two regulators. The main regulator which is installed in the main line and an auxiliary pilot regulator; the diaphragm of the pilot regulator being connected to the main line. The pressure on the diaphragm of the main valve is actuated entirely by the pilot mechanism. There are two ways in which this pilot principle may be applied.

To clearly set forth these two methods, we will refer to the accompanying sketches. Figure 1 represents the method wherein the pilot regulator 1 admits the pressure to the main diaphragm B of regulator 2, and when closed the pressure is relieved through a fixed opening C. This fixed opening may be either a small orifice or a needle valve slightly cracked.

Assuming this arrangement is to maintain a constant back pressure of 60 pounds, the operation would be as follows: When pressure tends to fall below 60 pounds, total force exerted on diaphragm A decreases, thus effecting a slight movement of the pilot valve X in the direction of A caused by a mechanical force, either weighted lever or spring tension. In these illustrations, we will assume that the pressure exerted upon the diaphragm is opposed by spring tension. This movement of valve X in the direction of A, we will say closes valve X, thus preventing any flow of fluid to diaphragm B. Whatever pressure was contained in diaphragm B, due to X being partly open, will then be relieved through fixed opening C. This decrease in pressure on diaphragm B permits the spring tension to move valve Y in the direction of B until closed. When valve Y commences to close, thus diminishing the flow of fluid being relieved, the desired 60 pounds will immediately be restored.

CONVERSELY, if the 60-pound pressure tends to increase this added weight on diaphragm A compresses spring and moves slightly in direction of X, thus slightly opening X and admitting some of the 60-pound fluid into diaphragm B. The pressure on diaphragm B increases or decreases as the relation of the area of X to constant opening C increases or decreases. As the pressure on diaphragm B increases it compresses its opposing spring force and moves in the direction of Y, thus opening Y and maintaining the desired pressure.

In Figure 2, the pilot regulator 1 governs the bleed from diaphragm B, and the fixed opening C is on the inlet to diaphragm B instead of outlet. In other words, their positions are reversed and the operation is as follows: Assuming the same conditions as in Figure 1, and assuming that valve Y moves downward to close—because obviously if the pilot valve is regulating the outlet instead of the inlet, then the action of either the pilot valve or the main valve must be reversed to compensate—we will assume the action of the main valve is reversed and closes when valve moves down instead of up as in Figure 1.

When 60 pounds pressure tends to increase, slightly greater force is exerted on diaphragm A; this overcomes the resistance of the spring tension and diaphragm A moves slightly in direction of X, thus opening X and relieving pressure from diaphragm B. As pressure is released from diaphragm B, spring tension opens valve Y sufficiently to maintain the desired 60 pounds. Conversely, if the 60 pounds pressure tends to decrease, valve X starts movement toward A and checks the flow from diaphragm B. Pressure then builds up on diaphragm B through fixed opening C. This increase in the main diaphragm pressure overcomes the resistance offered by spring tension and starts closing valve Y, checking volume of fluid passing in order to maintain the desired 60 pounds.

ONE manufacturer may so closely incorporate the two units that one is an integral part of the other, or he may deviate considerably in the travel of the fluid to and from the pilot valve. Another may incorporate the use of weights while others use springs but, in any case, the fundamental principle is identical. The sketches submitted and the outline are merely to illustrate this principle. They represent the basic formula in which a number of the quantities are variable.

With the use of this method of regulation, extremely accurate results may be secured. The reason is self-evident but may be briefly stated as follows: Only a fraction of a pound change in pressure will, through the medium of the pilot valve, supply sufficient pressure to the main operating diaphragm to obtain the full stroke of the main valve. For perfect operation, pilot operated regulators must be so designed that the entire unit is in positive equilibrium at all times, otherwise a pumping motion or a lag will result.

(To be continued next week)

Ed Stumpf, Modernist

ED STUMPF of Lancaster, Pa., is a modernist; he believes in evolution, or that sort of evolution which means a steady growth and development of business. Ed began with a plumber's shop in a rather obscure neighborhood only a few years ago. Today the plumber's shop is an accessory store and across the street is one of the first super-service stations in eastern Pennsylvania doing a business of 9000 gallons in gasoline a week and an oiling and greasing business that runs into four figures on the cash register each month.

The Stumpf service station is a paragon of cleanliness, a criterion for courtesy and a collector of cash for some of the little services that often are on the service station free list. How Ed Stumpf has gone after service station business and held it after he got it, will be told in the May 11 issue of NATIONAL PETROLEUM NEWS.

LOS ANGELES.—Joe Regan, president of the Regan Forge & Engineering Company, San Pedro, Calif., is minus an appendix, and hopes for good health for many years to come. This troublesome organ was removed April 18 and the patient is fast recovering, but probably will have to delay his trip to Mid-Continent for a week or so.

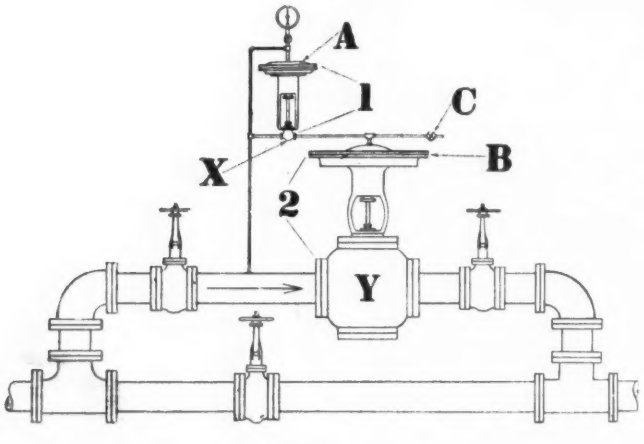

Figure 1

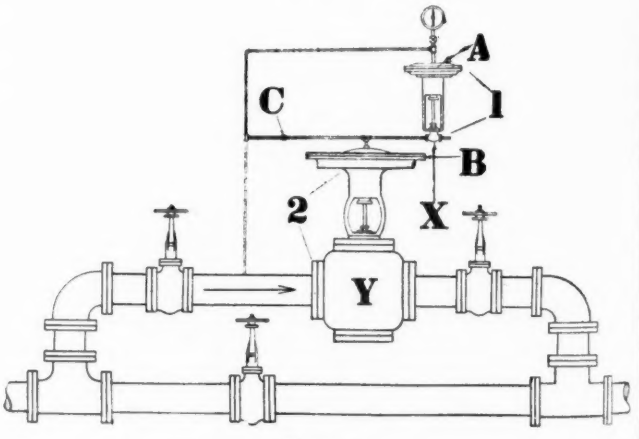

Figure 2

Supply Group to Entertain Gasoline Men at Convention May 24-26

TULSA, May 2

ENTERTAINMENT of gasoline men at the forthcoming annual convention of the Association of Natural Gasoline Manufacturers will be in the hands of associate members of the association which includes the supply group and trade press, it was announced today by A. V. Bourque, secretary. The convention this year is to be held at the Mayo hotel in Tulsa on May 24, 25 and 26.

A committee representing the associate members met at the home of W. G. Cummings on April 28, and worked out a plan of entertainment which includes two Dutch lunches and a smoker. A lunch will be given at noon on the first day of the convention and a smoker that evening with an elaborate vaudeville entertainment. The final feature of the entertainment will be a second lunch on the last day of the convention.

No lunch will be offered on the second day because of the banquet scheduled for that evening.

MEMBERS of the committee on entertainment include J. H. Satterwhite of Wescott & Greis, Inc., W. G. Cummings of the Gas Engineering & Construction Co., B. L. Potter of the Bessemer Gas Engine Co., T. F. Hudgins of the C. & G. Cooper Co., and T. C. Andrews of the General American Tank Car Corp.

At the past two conventions Wescott & Greis, Inc., has given a Dutch lunch for delegates which was appreciated by the association, since it allowed those attending meetings to be fed quickly and well with a minimum loss of time between business sessions. Several other supply companies wished to help with the entertainment this year which was one reason why the cooperative scheme was developed.

The association always has favored large group entertainment rather than multiplicity of smaller entertainment features provided by individual equipment manufacturers.

THE board of directors of the association will hold a special meeting at the hotel on Monday evening, May 23, to discuss current conditions in the industry with a view to see what may be done in addition to the present research and advertising campaign.

Overproduction of both crude and natural gasoline since the first of the year has driven market prices to levels far below cost and caused much concern among manufacturers.

General registration will begin on the 16th floor of the hotel the following morning. This will be followed by the first business session. The address of welcome will be followed by the annual address of the president, E. L. Peck, manager of the Empire Gasoline Co. The secretary-treasurer will offer his report and a number of committees will present the results of their work during recent months. A nominating committee will be appointed at this session to select candidates for offices for the next year.

At the afternoon session a paper will be presented dealing with the present economic situation in the industry. A complete report will be given at this meeting of the campaign of research and education which has been in progress during the past year.

The second day will be devoted almost exclusively to plant operating problems. Technical papers will be given on various phases of manufacturing. The annual banquet will be the closing feature of the day.

The third day will be motor fuel day. Dr. G. G. Brown of the University of Michigan, will be the chief speaker. He is expected to present a number of additional results of his studies of various types of gasolines with special reference to the value derived from blending natural gasoline with the refinery product.

C. E. Foster Chosen Crew Levick Manager; Other Men Promoted

PHILADELPHIA, April 29

SEVERAL promotions and transfers were made at the annual meeting of the Crew Levick Co., Philadelphia, a few days ago. Charles E. Foster was chosen vice-president and general manager; Andrew M. McBurney director and vice-president; W. W. Martin secretary, and Frank Hespell assistant secretary.

Other officers remain as follows: Henry L. Doherty, president; H. D. Frueauff, George Williams, and R. M. Shanklin, vice-presidents; E. E. McWhiney and C. B. Wedum, assistant secretaries; E. J. Hasse, treasurer, and H. H. Fisk and T. A. Wallace, assistant treasurers. Directors are: Mr. Doherty, H. O. Caster, Mr. Foster, George Williams, Mr. Hasse, L. F. Musel, Mr. Frueauff, P. R. Jones, W. A. Jones, Mr. McBurney, and Frank R. Coates.

C. E. FOSTER
New vice president and general manager, Crew Levick Co., Philadelphia

—Photo by the Phillips Studio

A. M. McBURNEY
New vice president and director, Crew Levick Co., Philadelphia

Like many other men in the oil division of the Doherty organization Mr. Foster came through the public utilities division. His first employment with the organization was as clerk with the Railway, Light, Heat & Power Co. of St. Joseph, Mo. He held various positions until he became secretary and treasurer of the company.

Mr. McBurney entered Crew Levick's employ in 1901. After serving a year in the laboratory he joined the sales force. Several years ago he was appointed manager of the gas and fuel oil department. His father at one time represented Crew Levick in England and his brother, George McBurney, is the present representative with headquarters at Liverpool.

Compilation Of Mid-Continent Refinery Operations

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National Petroleum News

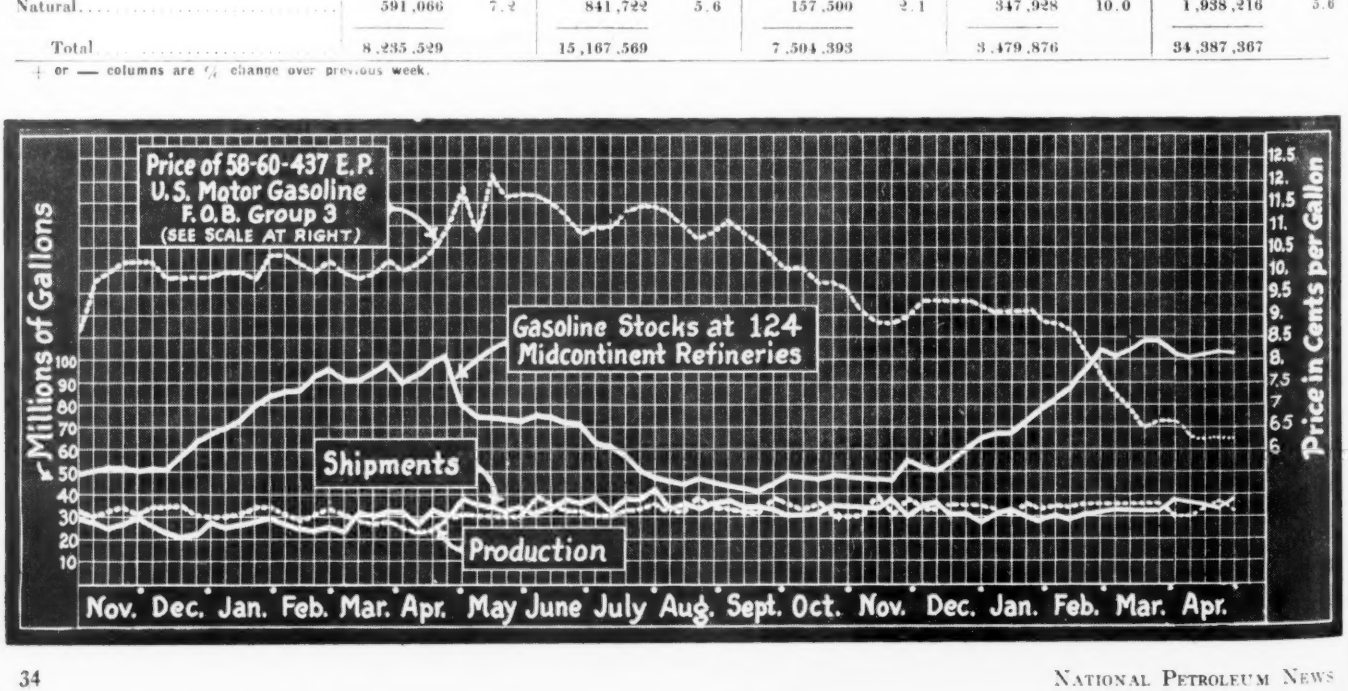
Mid-Continent Refinery Operations Week Ended Apr. 29 (By Telegraph)

	Kansas	Oklahoma	North and Cent. Texas	North La.-Ark.	Total Week Ended April 29	Total Week Ended Apr. 1
Plants Reporting	23	46	41	14	124	124
Crude Cap. (Bbls.)	98,200	165,900	144,300	53,700	462,100	462,100
Cracking Capacity	21,000	45,800	15,750	20,200	102,750	102,750
Da. Av. Crude Runs	58,661 + 8.1	109,260 — 5.4	70,066 + 5.8	46,026 — 9.7	284,013 — 1.0	279,697
Da. Av. Other Oils	4,795 + 2.1	—706	1,980 —55.1	1,855 +73.5	7,929 —28.0	13,101
GASOLINE—Gallons						
Stocks April 22	13,131,790	64,569,716	19,593,684	5,019,786	103,214,976	108,515,739
Prod. 4-22 to 4-29	8,235,529 + 7.9	15,167,569 — 6.6	7,504,393 + 2.1	3,479,876 + 8.3	34,387,367 — 0.2	33,946,935
Ship. 4-22 to 4-29	7,229,372 + 5.9	17,775,602 + 15.0	7,483,956 + 5.7	3,803,966 + 5.5	36,292,896 +10.1	39,711,809
Stocks April 29	14,137,947 + 7.7	61,961,683 — 4.0	19,614,121 + 0.1	5,595,696 — 5.5	101,309,447 — 1.8	102,750,865
Ratio Sales to Prod	77.8%	117.2%	99.7%	109.8%	105.5%	117.0%
KEROSENE—Gallons						
Stocks April 22	3,567,200	7,571,460	2,310,268	1,347,900	114,796,828	15,170,855
Prod. 4-22 to 4-29	1,525,302 +15.3	2,580,580 + 0.2	1,385,063 — 2.5	514,588 — 3.0	6,005,533 + 2.7	6,225,978
Ship. 4-22 to 4-29	1,705,586 +33.8	2,597,883 — 14.4	1,382,186 +12.1	567,298 —32.3	6,252,953 — 2.0	6,070,830
Stocks April 29	3,386,916 — 5.1	7,554,157 — 0.2	2,313,145 + 0.1	1,295,190 — 3.9	14,549,408 — 1.7	15,326,003
Ratio Sales to Prod	111.8%	100.7%	99.8%	110.2%	104.1%	97.5%
STOVE DISTILLATE—Gallons						
Stocks April 22	2,136,758	3,234,271	952,975	156,618	6,480,622	7,369,361
Prod. 4-22 to 4-29	285,360 —19.8	262,168 — 27.2	183,354 + 2.4	62,832 + 3.7	793,714 —16.9	1,344,080
Ship. 4-22 to 4-29	123,090 —61.2	672,758 — 6.4	256,846 +28.6	62,706 +16.0	1,115,400 —13.5	1,462,695
Stocks April 29	2,299,028 + 7.6	2,823,681 — 12.7	879,483 — 7.7	156,744 + 0.1	6,158,936 — 5.0	7,250,746
Ratio Sales to Prod	43.1%	256.6%	140.1%	99.8%	140.5%	108.8%
GAS OIL—Gallons						
Stocks April 22	5,739,896	41,661,811	12,092,841	7,968,364	67,462,912	60,752,697
Prod. 4-22 to 4-29	1,507,639 — 8.8	2,700,175 — 40.2	1,121,779 +13.0	1,906,723 —22.2	7,236,316 —24.7	9,409,845
Ship. 4-22 to 4-29	2,121,305 +34.5	2,866,785 +105.4	2,094,850 +10.8	1,553,489 —35.2	8,636,429 +18.9	7,896,658
Stocks April 29	5,126,230 —10.7	41,495,201 — 0.4	11,119,770 — 8.0	8,321,598 + 4.4	66,062,799 — 2.1	62,265,884
Ratio Sales to Prod	140.7%	106.2%	186.7%	81.5%	119.3%	83.9%
FUEL OIL—Gallons						
Stocks April 22	12,209,744	38,841,576	22,929,868	7,567,523	81,548,711	79,233,714
Prod. 4-22 to 4-29	6,593,149 +22.1	7,918,633 — 6.6	9,874,952 +13.1	7,078,866 — 0.5	31,465,600 + 5.9	27,687,976
Ship. 4-22 to 4-29	5,350,288 + 2.1	8,229,593 — 0.4	9,545,037 + 1.0	7,236,158 + 7.3	30,361,076 + 2.2	27,509,185
Stocks April 29	13,452,605 +10.2	38,530,616 — 0.8	23,259,783 + 1.4	7,410,231 — 2.1	82,653,235 + 1.4	79,412,505
Ratio Sales to Prod	81.1%	103.9%	96.7%	102.2%	96.5%	99.4%

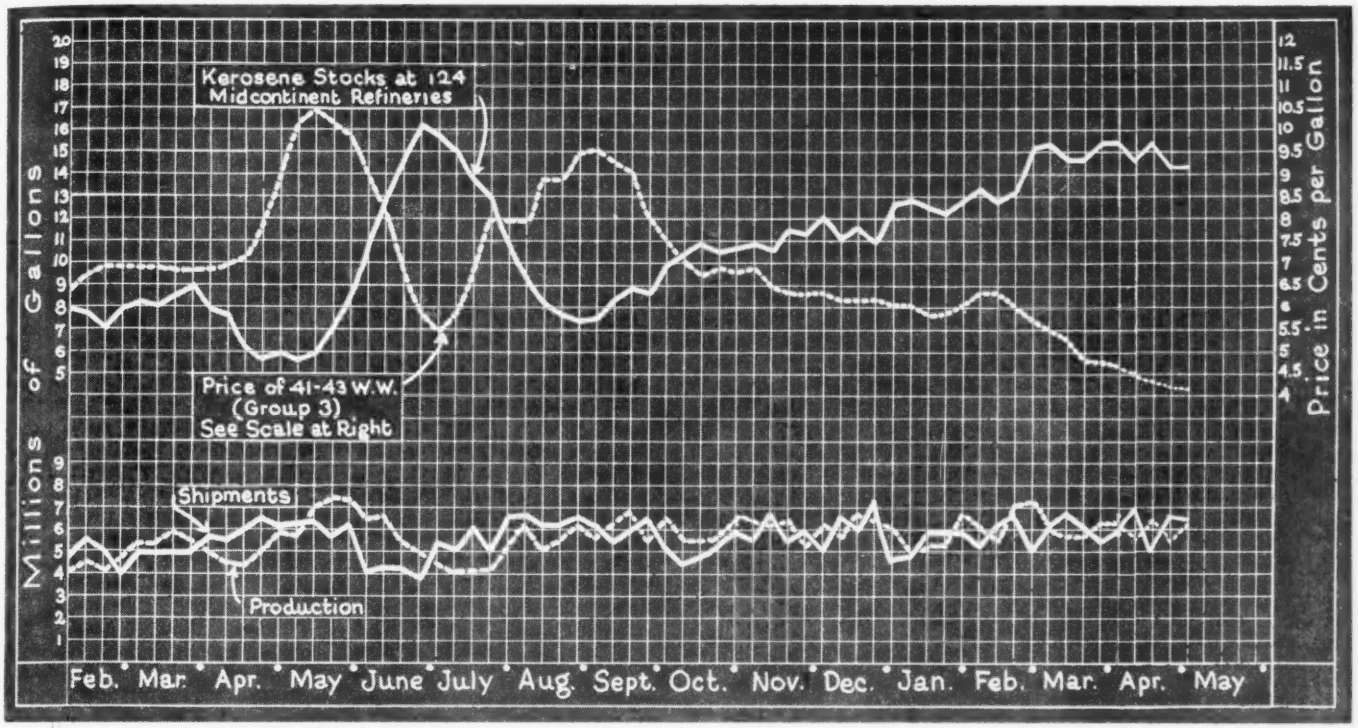
Gasoline Produced by Various Methods, Week Ended Apr. 29

	Kansas	% of Total	Oklahoma	% of Total	Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	5,573,393	67.7	11,785,274	77.7	6,436,905	85.8	1,503,336	43.2	25,298,908	73.6
Cracked	2,071,070	25.1	2,540,573	16.7	909,988	12.1	1,628,612	46.8	7,150,243	20.8
Natural	591,066	7.2	841,722	5.6	157,500	2.1	347,928	10.0	1,938,216	5.6
Total	8,235,529		15,167,569		7,504,393		3,479,876		34,387,367	

+ or — columns are % change over previous week.



Barometer of Mid-Continent Refinery Market– Week Ending April 29


Kerosene Stocks at 124 Midcontinent Refineries
Price of 41-43 W.W. (Group 3) See Scale at Right
Shipments
Production
Millions of Gallons
Price in Cents per Gallon
Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 124 Plants to National Petroleum News

124 Mid-Continent Refiners Lower Gasoline Stocks

Staff Special—By Telegraph

TULSA, May 3

SHIPMENTS of gasoline from 124 Mid-Continent refineries with total still capacity of 462,100 barrels a day, rose 3,300,000 gallons in the week ended April 29, the refineries reported to NATIONAL PETROLEUM NEWS. The increase in business enabled refiners to reduce gasoline stocks for the first time in three weeks. The reduction was 2,000,000 gallons at all plants to 101,309,447 gallons.

The stocks reduction was due almost entirely to Oklahoma refiners. In Oklahoma refiners reduced their charges of crude to stills 6200 barrels daily average to an average of 109,260 barrels. Production of gasoline therefore, was reduced more than 1,000,000 gallons to 15,167,569 gallons in Oklahoma.

Oklahoma refiners increased their sales. Shipments increased 2,300,000 gallons to 17,775,602 gallons. Stocks at the Oklahoma plants were reduced 2,600,000 gallons to 61,961,683 gallons.

Louisiana and Arkansas refiners reduced their gasoline stocks 300,000 gallons to 5,595,696 gallons. Shipments from that area increased slightly. North and central Texas refiners reported shipments almost balanced production. Stocks increased only 20,000 gallons to 19,614,121 gallons.

Kansas refiners increased their runs of crude to stills 4400 barrels daily average to an average of 58,661 barrels. As a result they increased their production of gasoline 600,000 gallons to 8,235,529 gallons. This group enjoyed an increase of 400,000 gallons in shipments but the increase was not sufficient to offset the larger production and stocks were increased 1,000,000 gallons. Stocks on hand April 29 at reporting Kansas plants were 14,137,947 gallons.

Shipments of kerosene from all reporting plants continued above 6,000,000 gallons. Refiners increased their production about 150,000 gallons in line with the better spring demand. Stocks were reduced 250,000 gallons to 14,549,408 gallons.

Stove distillate production was down to 793,714 gallons. Shipments were maintained at 1,115,400 gallons, enabling refiners to reduce their stocks 330,000 gallons to 6,158,936 gallons.

Cracking operations in the Mid-Continent were increased slightly and gas oil stocks were reduced for the first time since the last week of January. Production was 7,236,316 gallons and shipments 8,636,429 gallons bringing stocks down to 66,062,799 gallons.

Fuel oil was the only commodity included in the report which did not show shipments larger than production. Stocks of fuel increased 1,100,000 gallons to 82,653,235 gallons at all plants. Oklahoma, north Louisiana and Arkansas refiners made slight reductions in their stocks but increases were reported in Texas and Kansas.

Summary for the Month

Production and shipments, all reporting refineries for four weeks ended April 29. Change in stocks figured from April 1.

Gasoline	Gallons
Production	136,668,593
Shipments	138,110,011
Net change in stocks	—1,441,418
Ratio sales to production	101.1%

Kerosene	
Production	24,027,925
Shipments	24,804,520
Net change in stocks	—776,595
Ratio sales to production	103.2%

Stove Distillate	
Production	4,407,398
Shipments	5,499,208
Net change in stocks	—1,091,810
Ratio sales to production	124.8%

Gas Oil	
Production	33,043,072
Shipments	29,246,157
Net change in stocks	3,796,915
Ratio sales to production	88.5%

Fuel Oil	
Production	120,199,507
Shipments	116,958,777
Net change in stocks	3,240,730
Ratio sales to production	97.3%

Patented Ford Oil Base

NO ONE disputes the fact that this Company put out the first chatterless Ford Oil. No one denies that this formula or Process oil was patented. Over a year *after* this oil was on the market one large oil marketer claimed "their Engineers" had worked four years to solve the chatter problem and only a week or two ago another large oil company stated in a double page advertisement that "their Engineers" had been working five years for the same purpose. Now here are the facts:

A small percentage of either dry or liquid Metallic soap MADE RIGHT and USED RIGHT will take the chatter out and keep it out as long as there is any oil in the crank case. The great discoveries of these "engineers" take it out, but in order to keep it out the oil must be replenished every hundred miles or so, according to our experience.

The Chatterless Ford Oil business has been immeasurably hurt by inexperienced or careless marketers recommending their own or some other brand that was not made RIGHT, and by that we mean to say it is impossible to cheat or sidestep the extra expense of a GOOD FORD OIL. The BASE must be made out of certain tested material, the process cannot be hurried and it requires careful attention; then the base must be mixed properly with the right grade of lubricating oil. Slip one step on this ladder and the product will not stand up.

Don't sell a "get by" Ford Oil. There are fifteen million Ford cars and trucks running in the United States. The demand is there and increasing. We make WARCO Motor Oil F. We want distributors and would appreciate sending our sales plan to you. We manufacture WARREN Ford Oil Base and it is absolutely right. The purchase of this base carries with it a license to re-sell it. We have licensed several large manufacturers of liquid and dry Metallic soap who can quote you on a high grade product, because we will not issue a license to use our patent number without an agreement regarding specifications as to their base. We are going to protect our patent because it makes the best Ford oil and we believe this fact is becoming generally recognized. As proof of this statement we have issued to and are now negotiating with some of the very largest Oil Companies in the United States for license to manufacture a Ford oil under our patent.

THE WARREN REFINING & CHEMICAL CO.

E. L. CANNON, President

Cleveland, Ohio

Table No. 2

Comparison of increases in gasoline shipments from Mid-Continent refineries with increases in consumption in 11 mid-western states during January and February.

	1926 (Gallons)	1927 (Gallons)	Pctage Increase
Shipments from all Okla.-Kans. Plants (A):			
January	139,524,000	155,862,000	11.7%
February	129,780,000	150,696,000	16.1%
Total	269,304,000	306,558,000	13.8%
Shipments from Okla.-Kans. plants reporting to the National Petroleum News (B):			
January	76,951,000	95,563,000	24.2%
February	74,266,000	83,907,000	13.0%
Total	151,217,000	179,470,000	18.7%
Indicated Shipments from Okla.-Kans. plants not reporting to National Petroleum News (C):			
January	62,573,000	60,299,000	*3.6%
February	55,514,000	66,789,000	20.3%
Total	118,087,000	127,088,000	7.6%
U. S. Domestic Gasoline Demand (A):			
January	738,444,000	751,296,000	1.7%
February	664,188,000	766,080,000	15.3%
Total	1,402,632,000	1,517,376,000	8.2%
Gasoline Consumption in 11 important states wherein bulk of group 2 and 3 gasoline is marketed as indicated by the state tax and inspection reports (D):			
January	166,744,000	172,169,000	3.3%
February	151,187,000	164,610,000	8.9%
Total	317,931,000	336,779,000	5.9%

Notes—

*Percentage decrease.
(A) Based on Bureau of Mines reports.
(B) Based on weekly figures of National Petroleum News.
(C) Arrived at by deduction.
(D) Quantities as reported by American Petroleum Institute for Indiana, Kansas, Minnesota, Missouri, North Dakota, Oklahoma, South Dakota, Iowa, Michigan, Nebraska and Wisconsin.

Gasoline Shipments Above Consumption

(Continued from page 25)

which would attract orders ahead of their competitors in other areas. As the overproduction has become more apparent the Mid-Continent manufacturers have been running into stiffer competition in the sale of their goods and have not been able to hold their gains. Weather conditions have had some effect also in cutting down increases in gasoline demand as compared with last year. This has been particularly true in recent weeks.

Table No. 2 as prepared by Mr. Davis compares total shipments for January and February with last year and indicated consumption in 11 mid-western states.

Dollar Volume of Trade Continues Large

WASHINGTON, April 30.—The dollar volume of trade for the week ended April 23, as measured by check payments, was larger than in either the preceding week or the corresponding week of 1926, according to the Department of Commerce. Wholesale prices continued to decline, being substantially lower than in the corresponding week of the preceding year.

Loans and discounts of Federal reserve member banks receded slightly from the previous week but were still well above the corresponding week of last year. Interest rates on time money averaged higher than in either the preceding week or the corresponding week of 1926. Bond prices, though showing no change from the preceding week, were substantially higher than in the same week of the previous year. Interest rates on call loans, although showing a decline from the preceding week, averaged higher than in the same week of last year. Prices of stocks listed on the New York Stock Exchange continued to increase, both as compared with the preceding week and the corresponding week of the previous year.

Loans to brokers and dealers made by Federal reserve member banks in New York City and secured by stocks and bonds were larger than in either the previous week or the corresponding week of 1926. The Federal reserve ratio averaged higher than in the previous week or the same week of last year. Bills discounted by Federal reserve banks were smaller than at the end of the previous week or the same period a year earlier. Receipts of cotton were higher than a year ago. Business failures were less numerous than in either the preceding week or the corresponding week of the previous year.

The production of bituminous coal during the third week of April was smaller than in either the previous week or the same week of 1926. Beehive-coke output showed similar comparisons with both prior periods.

New building contracts awarded during the first three weeks of April were running higher than a year ago. Distribution of goods, as seen from data on carloadings, was running higher than last year.

New Marketer for Hyvis Oil

COLUMBUS, O., April 30.—The Scioto Hyvis Co. has been incorporated here to market lube oils and to specialize in the distribution of Hyvis motor oil, manufactured by the Fred G. Clark Co., Cleveland.

E. H. Condon is president of the new company. He has been in the oil business in Ohio for 20 years. Walter T. Fassig, a coal dealer here, is vice president and secretary, and William L. Payne, a Columbus business man is treasurer.

The oil industry is being threatened by two converging streams

One stream is the over-production of crude The other is the increased production of gasoline obtained from the crude by means of the cracking process These two streams are threatening the industry with drowning in a sea of golden wealth

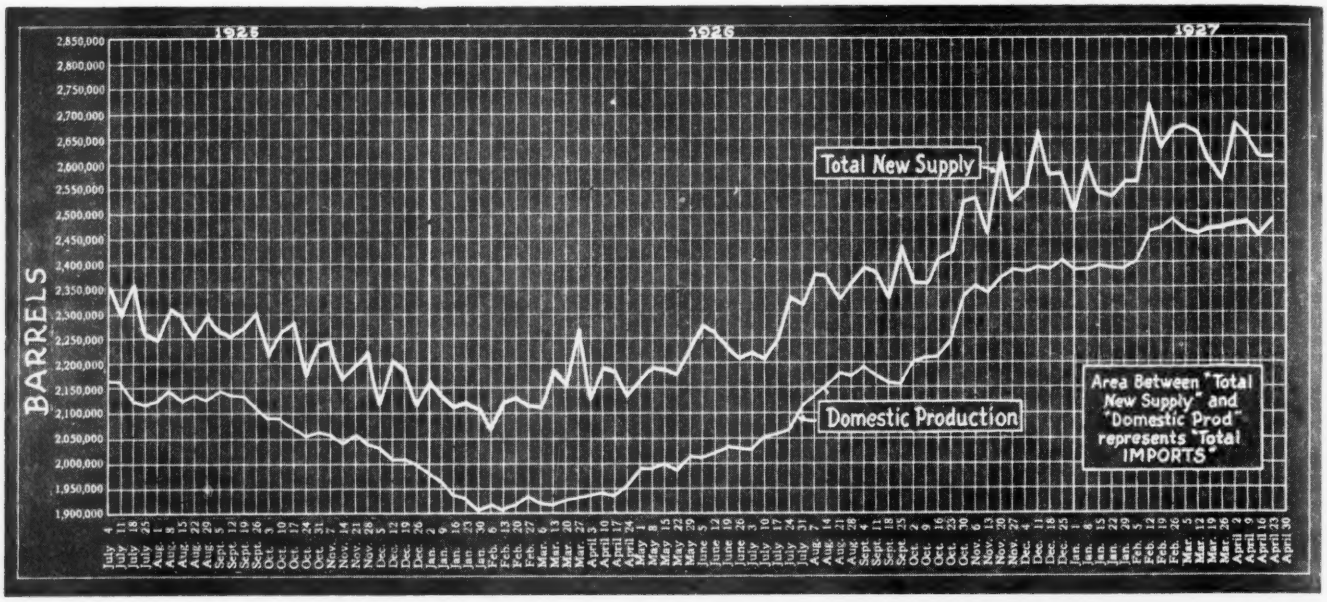
The Cracking stream cannot and should not be "damned" It is economically sound, economically profitable, and the greatest possible factor in conservation

The other stream (Over-production of Crude) is receiving the serious consideration of both producers and the State and Federal Government

It should be and can best be handled by the industry But if the industry won't—?

Universal Oil Products Company
Owner of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below, as compiled by American Petroleum Institute

Production Summary

	April 30	April 23
Production east of Rockies		1,837,100
Increase or Decrease		
Total Production in U. S.		2,478,100
Increase or Decrease		
Crude Oil Imports	140,000	135,571
Increase or Decrease		
Total Crude Supply		2,613,671
Increase or Decrease		

OKLAHOMA

	April 30	April 23
North Braman	6,450	6,500
South Braman	3,450	3,450
Blackwell	4,000	3,900
Hubbard	8,050	8,200
Thomas	1,450	1,450
Tonkawa	22,750	23,200
Garber	16,100	16,650
Burbank	42,300	42,500
Osage, outside Burbank	35,050	35,050
Watchorn	2,500	2,600
Cushing	21,250	21,200
Yale Jennings	11,750	11,800
Davenport	3,450	3,400
Bristow-Slick	27,250	27,250
North Okmulgee	17,250	17,250
Lyons-Deaner	4,400	4,400
Stroud	1,500	1,450
Cromwell	12,850	13,250
Papoose	6,750	6,950
Wewoka	21,400	17,850
Seminole	288,850	289,700
Duncan district	7,350	7,200
Graham	7,700	7,700
Fox	1,800	1,800
Healdton	15,000	14,500
Scholem-Alechem	15,100	15,000
Hewitt	10,000	10,000
Earlsboro	53,000	43,600
Others	64,250	64,050
Total Oklahoma	733,000	721,850
Increase		11,150

KANSAS

Greenwood County	39,600	40,000
Florence-Covert	1,900	1,900
Peabody-Elbing	3,850	3,850
Eldorado-Towanda	13,250	13,200
Augusta-Fox-Bush	4,600	4,550
Rainbow Bend	2,400	2,400
Russell	3,200	3,250
Churchill	16,800	17,500
Others	29,300	29,000
Total, Kansas	114,900	115,650
Decrease		750

NORTH LOUISIANA

Homer	5,150	5,200
Haynesville	7,750	7,800
Caddo, light	9,950	10,150
Caddo, heavy	3,450	3,350
De Soto Red River	4,250	4,400
Elm Grove	600	550
Bellevue	1,550	1,600
Cotton Valley	5,850	6,000
Urania	8,550	10,800
Total, N. Louisiana	47,100	49,850
Decrease		2,750

ARKANSAS

	April 30	April 23
El Dorado	6,000	6,100
Smackover, light	11,250	11,000
Smackover, heavy	79,600	84,250
Stephens	1,400	1,400
Nevada	1,400	1,350
Lisbon	4,250	4,300
Others	100	100
Total, Arkansas	104,000	108,500
Decrease		4,500

Texas (Outside Gulf Coast)

Panhandle District:		
Hunchinson County	105,500	103,550
Gray County	9,050	8,250
Carson County	12,700	10,450
Wheeler County	3,500	2,400
Others	50	50
Total, Panhandle District	130,800	124,700
Increase		6,100
North Texas		
Burkburnett	13,150	13,250
Electra	14,000	14,000
Iowa Park and K-M-A	3,900	4,000
Wilbarger	14,050	14,150
Archer County	29,550	29,900
Montague-Cooke	14,350	14,550
Others	900	900
Total, North Texas	89,900	90,750
Decrease		850
West Central Texas		
Stephens County	9,100	9,250
Eastland-Desdemona	6,500	6,600
Brown County	29,500	29,900
Coleman County	1,600	1,600
Callahan County	4,250	4,500
Shackelford County	13,250	13,550
Young County	7,800	7,950
Throckmorton County	3,300	3,500
Palo Pinto County	1,900	1,950
Jones County	2,500	2,600
Mitchell & Scurry Counties	3,750	3,850
Howard County	2,800	2,250
Reagan County	26,600	26,900
Crane & Upton Counties	64,450	64,150
Pecos County	2,500	3,000
Others	4,500	4,450
Total, West Central Texas	184,300	186,000
Decrease		1,700
East Central Texas		
Mexia	11,000	11,050
Currie	600	600
Richland	900	900
Wortham	3,550	3,650
Corsicana-Powell	19,100	19,200
Nigger Creek	5,650	5,750
Total, East Central Texas	40,800	41,150
Decrease		350
Southwest Texas		
Luling	17,700	17,900
Lytton Springs	2,100	2,150
Somerset	1,200	1,200
Laredo District	14,550	14,650
Piedras Pintas	50	50
Others	600	600
Total, Southwest Texas	36,200	36,550
Decrease		350
Total, Texas—(Outside Gulf Coast)	482,000	479,150
Increase		2,850

GULF COAST

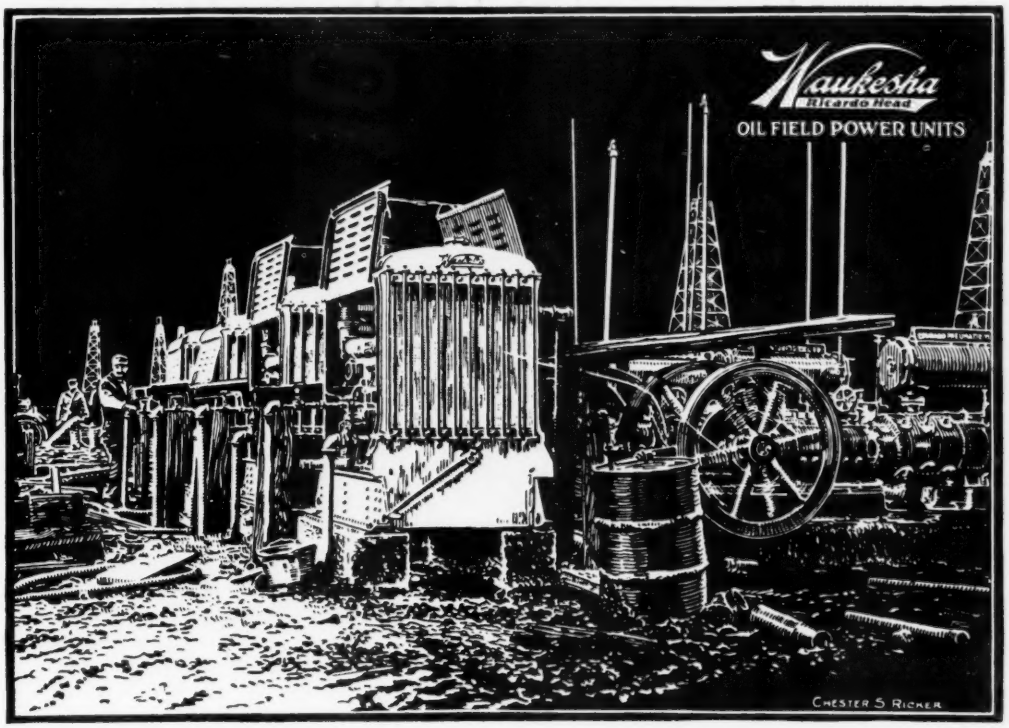
Coastal Texas

	April 30	April 23
West Columbia	9,900	10,250
Damon Mound	950	950
Big Creek	5,250	5,550
Boling	2,250	2,150
Blue Ridge	2,700	2,900
Pierce Junction	7,550	6,850
Humble	3,700	3,750
Goose Creek	9,000	9,550
South Liberty	3,000	3,050
Hull	19,850	19,950
Saratoga	1,150	1,050
Batson	1,500	1,400
Sour Lake	4,750	4,700
Spindletop	50,700	54,650
Orange County	5,500	5,950
Others	6,250	6,000
Total, Coastal Texas	134,000	138,700
Decrease		4,700
Coastal Louisiana		
Vinton	5,400	5,650
Lockport	7,950	10,500
Evangeline	950	1,000
Edgerly	900	1,000
Others	2,500	2,850
Total, Coastal Louisiana	17,700	21,000
Decrease		3,300
Total, Gulf Coast	151,700	159,700
Decrease		8,000

* * *

Note: We regret that the figures for the production summary and production in Rocky Mountain, California and Eastern fields were not available at press time due to failure to receive telegraphic reports. These figures will be published in the May 11th. issue.

Battery of 100 *H. P. Waukesha Oil Field Units at Tonkawa, Okla.*



P-731-L

$10.00 a Minute

That's what it costs in production loss if this plant is shut down. Continuously, night and day, these Waukesha "Ricardo Head" Oil Field Power Units toil delivering gas at 250 pounds pressure from two-stage 10x4½x10 gas compressors that they drive. What better proof of Waukesha stamina and reliability could you ask?

Waukesha "Oil Field Power Units" have contributed very greatly to the successful flowing of oil in the seminole field where more than a unit a day went into the field during the boom. Waukesha Units are also built for pumping oil and water and drilling wells, either with cable or rotary rigs. Write for further information if you are interested.

P-731-L *OIL INDUSTRY EQUIPMENT DIVISION*

WAUKESHA MOTOR COMPANY

Waukesha Wisconsin

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Exclusive Builders of Heavy Duty Gasoline Engines for Over Twenty Years

"Where you cannot keep other valves tight"

THE *Jenkins fair offer says: "If you will put a Jenkins Valve on the worst place* you can find, where you cannot keep other valves tight, and if it is not perfectly tight, or does not hold steam, oils, acids, water or other fluids longer than any valve, *you may return it, and your money will be refunded."*

Jenkins service may be obtained only from Valves marked with the Jenkins Diamond and signature. Be sure you see this mark.

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Jenkins Valves
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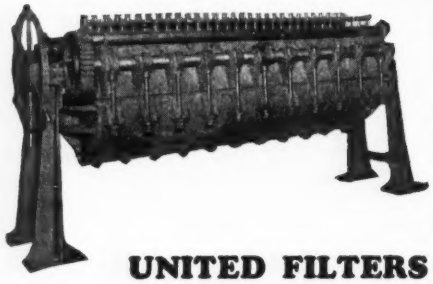

FILTERING fine clays need not be a messy, ineffectual job.

Sweetland Pressure Filters have provided clean, quick, efficient filtration for this better process.

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Refinery
PUMPS

Bulletins on Request.

National Transit Pump & Machine Co.
OIL CITY, PA.

District Offices: **New York, Philadelphia, Tulsa, Cleveland, Pittsburgh, Houston and Denver.**

Automobile Output Falls; More Trucks Made

NEW YORK, April 29.—*Automotive Industries* this week said:

Despite reduced car manufacturing operations by two or three highly important producers, the total for the industry has this month approached closely the record-breaking rate established in April of last year. Sales are fairly satisfactory in most parts of the country but the eastern manufacturing districts are taking a larger proportion of the new cars than they did last year.

Business in the middle western and southern agricultural regions has been below the 1926 level, and it is feared that flood conditions will act as a deterrent, although experience has tended to show that unfavorable factors of this character are localized in effect to the districts immediately concerned.

Car and truck production in the United States and Canada for the first quarter was 14.2 per cent below the first quarter of 1926. For passenger cars alone the reduction was 16.7 per cent, trucks having gained 5.6 per cent.

Scrapping of old cars is proceeding at a rapid rate, and indications are that the number of vehicles thus removed from the registration lists will exceed this year the mark of over two millions reached in 1926. It is estimated that in 1927 approximately 75 cars will be removed from service for every 100 new ones sold.

Free Dance Opens Station

LINCOLN, NEB., April 29.—Lincoln Oil Co. has opened a two-pump service station at Emerald, Neb., on the Detroit, Lincoln, and Denver highway, near here. Garage space with the station has been subleased. In opening the station a free dance was given in the garage.

LINCOLN, NEB., April 29.—With opening of the local baseball season today the Lincoln Oil Co. again proffered vacant space at the company's service station adjoining the ball park to fans for parking. This is the fourth year that Lincoln Oil Co. has so accommodated fans.

LOS ANGELES, April 30—California Eastern Oil Co. this week let the contract for erection of a natural gasoline plant at Long Beach, Newton equipment to be used. The plant will have a daily capacity of between 12,000 and 15,000 gallons.

SAN FRANCISCO, April 30.—Standard Oil Co. of California this week announced a gift of $5000 to the Red Cross flood relief fund. The California oil fraternity is responding liberally to the call for funds, largely through individuals.

ELKINS, W. VA.—Triangle Filling Station has become a distributor in Randolph county for Tydol gasoline and Veedol motor oil, products of the Tide Water Oil Co., New York City, according to Harry C. Grimes, owner of the station.

Seminole Has Produced 40,913,958 Bbls. And is Less Than Year Old

By A. F. Hinton
N. P. N. Staff Writer

TULSA, April 30

UP to April 20, the Seminole district, comprising the Seminole, Searight, Earlsboro and Bowlegs fields, had produced 40,913,958 barrels since the first Hunton lime well was drilled in April 9, 1926. The Wilcox sand was discovered July 16, 1926. The Hunton and Earlsboro sands together have produced probably not more than two million barrels, so that it is safe to say the Wilcox sand has produced about 39 million barrels of crude in the 42 weeks since its discovery.

A table accompanying this article gives acreage of each producing lease in the district, together with number of wells on production at time estimate was made. It also shows date on which production started on each lease where information was available. Total acreage of leases on which production has been developed in the entire district is 5460, which indicates a yield to date of about 7500 barrels per acre.

If, instead of using the total lease acreage, which includes undrilled territory, we assign 10 acres to each of the 335 wells included in the table (the 30 Earlsboro sand wells are not listed), it gives the district 3350 acres of productive area. Dividing this figure into total gross production to date, the result shows a yield of 12,213 barrels per acre.

Seminole proper, which was the nucleus of the development, as it was the scene of the discoveries of both the Hunton lime and the Wilcox sand, has produced 31,490,910 barrels. Leases on which production has been developed total 3630 acres, which shows a yield of about 8800 barrels per acre. Using the 10-acre-to-each-well method, the productive area drops to 2640 acres, and the yield per acre rises to 11,928 barrels.

Searight, which has made a remarkable record for sustained production the past four months, had produced 4,963,308 barrels up to April 20, from 410 acres of productive leases, or 12,106 barrels per acre. Its yield on a 10-acres-per-well basis would be considerably higher, as there were only 31 wells producing at date of estimate. Since Dec. 15, 1926, Searight's production has not been lower than 28,260 barrels nor higher than 34,694 barrels. During that period its producing wells increased from 12 to 33 and its average production per well dropped from 2469 to 1051 barrels.

The discovery well at Earlsboro was drilled in about Nov. 20, 1926. Now there are 12 Wilcox sand wells producing and they had yielded 2,303,922 barrels to April 20. Its productive territory is 480 acres, which indicates a yield of 4800 barrels an acre. Assigning 10 acres to each of the 12 wells shows that they have produced at the rate of 19,200 barrels an acre. The figures given for Earlsboro in this report do not include several recent wells which added 17,000 barrels to the field's daily output during the past week.

Bowlegs, the youngest, but second largest and fastest-growing of the four fields, was discovered Dec. 27, 1926, when the Indian Territory Illuminating Oil Co. drilled in its No. 1 Davis in section 13-8-6. Aside from this one well, everything at Bowlegs has been done since the start of the current year. Up to April 20, this field, which then boasted of 28 wells, had produced 2,155,818 barrels, with an estimated 940 acres of productive territory. This acreage already has produced 2293 barrels per acre. If we limit poductive territory to 10 acres around each of the 28 wells, the yield per acre is 77,000 barrels.

The largest production from any single lease in the Seminole district so far is that from the Pure Oil Co.'s 160-acre Strothers farm in the SW¼ of 26-9-6.

Late Completions

(By Telegraph)

TULSA, May 2—The most important well in the Seminole district at present is Gypsy-Margay, No. 1 Brown, in southwest corner SE of 33-8-6, three miles south of production in the Bowlegs field. This well got the Wilcox sand at 4457 feet and, at one foot in, is flowing by heads at the rate of 35 barrels an hour. It made 385 barrels the first nine hours after drilling in. Peculiar features about this well is that it is apparently more than 300 feet lower structurally than Gypsy Walker well in Section 14 in Bowlegs field.

At Earlsboro, Gypsy has two new wells in Wilcox sand. Its No. 2 Peter in southeast SW SW of 10-9-5 got sand at 4370 feet and at two feet in flowed 360 barrels in 15 hours. Its No. 1 McFarland, in the southwest corner SW of section 9, made 1017 barrels in 24 hours at one foot in sand topped at 4290 feet. Independent and Darby No. 1, Knappenberger, west offset to Crosbie extension well at Earlsboro is making about 3500 barrels. Seminole district recorded peak of its history April 28 when it made 347,278 barrels. Saturday it was 345,862 from 380 wells.

Drilling Operations in Oklahoma, Kansas and Texas

	April 30 — Week Ended					April 23				
OKLAHOMA	Loc.	Rigs	Drg.	S.D.	Total	Loc.	Rigs	Drg.	S.D.	Total
Burbank	...	8	23	8	39	...	13	18	5	36
Other Osages	15	6	25	12	58	16	8	27	10	61
Bristow-Cushing	8	3	79	10	100	6	3	84	9	102
North Oklahoma	4	13	94	36	147	3	9	97	38	147
South Oklahoma	21	18	162	50	251	17	22	169	47	255
Muskogee	...	5	28	21	54	...	8	25	30	63
Okmulgee-Bristow	7	50	86	34	177	7	42	104	27	180
Tonkawa	0	...	7	...	7	...	...	6	1	7
Seminole Dist.	40	63	467	42	612	39	59	463	31	592
Total Oklahoma	95	166	971	213	1445	88	164	993	198	1443
KANSAS	54	53	146	102	335	50	57	169	87	363
TEXAS										
Central	...	118	309	171	598	...	124	320	176	620
East	...	2	10	11	23					
Panhandle	...	90	279	102	471	...	85	305	83	473
N. Central	...	55	89	28	172	...	55	104	25	184
West	...	96	155	72	323	...	102	161	64	327
Laredo	...	3	21	1	27					
Total Texas	...	366	863	385	1614	...	366	890	348	1604
GRAND TOTAL	149	585	1980	700	3414	138	587	2052	633	3410

Completions in North Louisiana and Arkansas, Week Ending Apr. 29

LOUISIANA

Caddo Parish—Caddo District

Company	Well	Location	Depth	Yield
Dixie Oil Co. (Standard of Ind.)	Robertshaw No. 86	14-21-15	1737	10
Magnolia Pet. Co.	Dillon No. 20	23-21-15	1620	15
Texas Company	Hardy No. 1	10-20-16	2310	10
Thomason et al.	Muslow Fee No. 7	31-21-15	2210	15

Sabine Parish—Pleasant Hill-Pelican

Arkansas Fuel Oil Co.	Logan Oil Co. No. 5	28-10-12	3225	50

Morehouse Parish—Bastrop

Company	Well	Location	Depth	Yield
Ladell et al.	Fee No. 38	21-20-5E	2257	15m. gas
La. Gas Prod. Co.	Fee No. 5	20-20-5E	2280	5m. gas

ARKANSAS

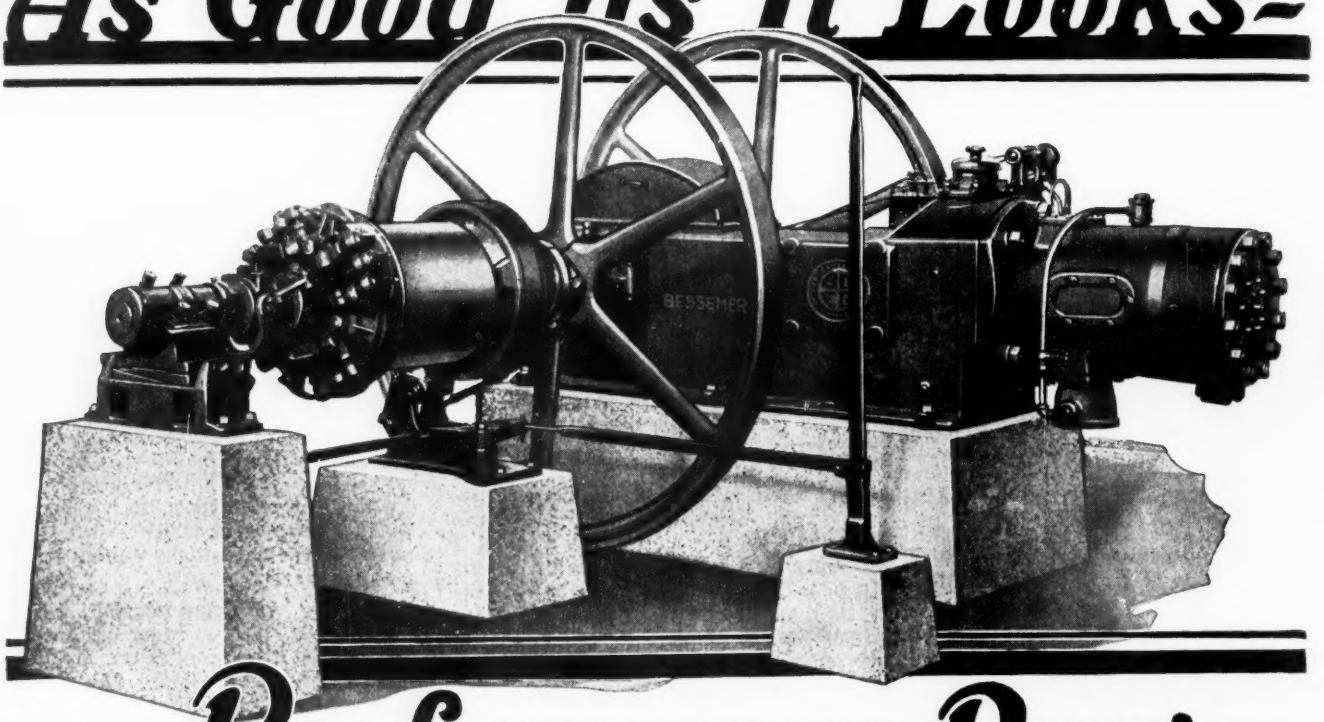
Smackover

Stewart et al.	Murphy No. 8	9-16-15	2788	1800

Union County—Hillsboro

J. Wolvey	Simmons No. 1	15-18-13	2682	70m. gas

As Good as It Looks-



as Performance Proves

THE BESSEMER OIL FIELD ENGINE looks like the finest of all oil country engines, and proves that it *is* the best by its performance.

It looks like a *real* power plant—sturdy, simple and serviceable—and in its performance lives up to its appearance 100%.

It is entirely enclosed, combines force feed and splash lubrication, has mixing valve on top of bed plate, has a large exhaust, all parts are quickly and easily accessible, and is *overstrength* in every part that receives stress, strain or wear.

For longer running time, lower maintenance cost and utter dependability it is the outstanding oil country engine.

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BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

This property had produced 3,166,960 barrels up to April 20, or 19,795 barrels per acre. First production was obtained on this lease Oct. 22, 1926. It has therefore averaged about 528,000 barrels per month, or 17,600 barrels per day, during its life. Its present production is 11,950 barrels as compared with a peak of better than 30,000 barrels.

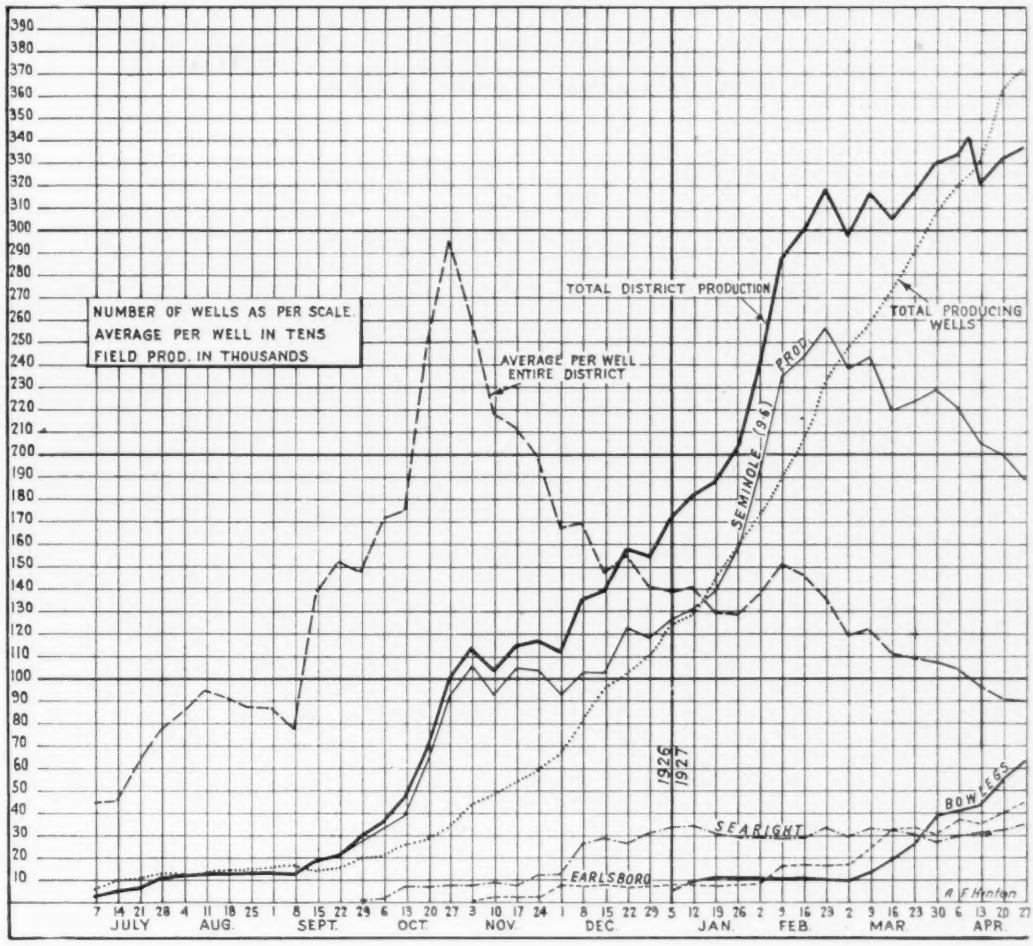
The discovery lease of the Independent Oil & Gas Co. and R. F. Garland still is in second place in amount of crude produced, although several properties are pressing it closely and probably will soon pass it in total yield. This 80-acre lease has produced 1,757,550 barrels, or 21,969 barrels per acre, from eight wells. During its life of about 300 days, the lease has averaged 5840 barrels daily, although its present production is 1360 barrels daily.

Other Seminole leases that have produced more than one million barrels of crude include the Amerada's Fixico in 23-9-6, with 1,082,450 barrels, a 40-acre lease; Barnsdall's Carter 80-acres on 24-9-6, 1,537,070 barrels; Gypsy Oil Co. Wolfe 80-acres in 26-9-6, 1,114,950 barrels; I. T. I. O. Bowlegs in 26-9-6, 120 acres, 1,295,400 barrels; Prairie Oil & Gas Co. Strothers, 80-acres in 27-9-6, 1,275,570 barrels; Sinclair Cudjo-A, 60 acres, 1,184,030 barrels and Cudjo-B, 33 acres, 1,196,155 barrels, both in 35-9-6; T. B. Slick Franks 80-acres in 35-9-6, 1,709,651 barrels; and the Tidal Oil Co. Fixico, 80-acres in 26-9-6, 1,302,535 barrels.

The production chart accompanying this article traces the history of Seminole graphically since discovery of the Wilcox sand. The various fields making up the district are spotted in at approximately the dates on which their first wells started producing; production of each of the four fields is shown as well as that of the district as a whole. The sharp decline of Seminole proper, starting in the latter part of February, shows up strikingly, and it is interesting to note that increasing production in all the other three fields, notably Bowlegs, kept the district total going upward after a period of ups and downs.

Peak production for the district was reached April 8, when 341,979 barrels were produced. Although this peak has been passed twice since then, it happened in the last two days and so does not show on the chart, which runs only to April 27. In subsequent issues of NATIONAL PETROLEUM NEWS, this chart will appear again from time to time.

Chart of Seminole Wells and Production



Graphic History of Seminole District since discovery of Wilcox sand. Chart shows production of various fields at end of each week as shown and does not represent average production over the week.

Kosse Wildcat Bailed Without Show

Staff Special

HOUSTON, April 30—The jinx that had followed Kosse as an oil territory continued to hold at the end of the week.

C. W. Harrison and the Pandem Oil Co., drilling on the Bassett farm, about two miles northwest of town, bailed down 3500 feet in a 4530-foot hole without getting an important show of oil or gas. The test was first reported showing oil and gas through a hole full of mud at the beginning of the week. With bailing still 1000 feet off bottom, it is possible that mud in the hole sealed off the original show, but completion of a well at present depth is now generally discounted.

After further testing the hole will be drilled to contract depth of 5500 feet by Brandon & McCamey, contractors. The Trinity sand, which is believed to underlie the area, is the objective horizon, unless oil is found at a higher level. At present depth the drill is believed to have penetrated either the lower part of the Edwards formation or the upper part of the Glen Rose section.

Many wells have been drilled in southwestern Limestone county, adjacent to Kosse, since the Jones discovery of the A. E. Humphreys interests, about one mile from town, in the fall of 1922. The Jones well produced a total of 48,000 barrels from total depth of about 3700 feet after which it was never possible to obtain other oil from it or from test wells drilled in the general area.

Big Wells Call Attention To Salinas Area

Staff Special

HOUSTON, April 28—Four operating companies control the Salinas area, in the northeastern part of the Greater Panuco district of Mexico, where two wells making 30,000 barrels and 10,000 barrels, respectively, have just been completed. The four companies are the Mexican Gulf, the Huasteca, the Kern-Mex and the Control de Administracion de Petroloe Nacional.

The "Control" well, good for 30,000 barrels, and a 10,000 barrel completion of the Huasteca, are near the tracks of the National Railways of Mexico, along which Huasteca has important production in the Corcovado area.

Salinas production is found in the lime horizon at about 2130 feet, drilling depth.

Production and Acreage - Seminole District as of April 20, 1927

Company Lease	Location	No. of Prod Wells	Gross Prod. by leases	Prod. by Companies	Acreage	Date Prod. Started
AMERADA PET CORP						
Fixico	23- 9-6	4	1,082,450		40	12- 1-26
Killingsworth	23- 9-6	4	500,890		40	9-13-26
Rentie	23- 9-6	4	439,880		40	12-31-26
				2,023,220		
ATLANTIC PET. CORP.						
N. Cudjo	35- 9-6	3	383,760		40	2- 5-27
J. Cudjo	35- 9-6	2	18,430		40	2-12-27
				402,190		
BARNSDALL CORP.						
Carter	24- 9-6	9	1,537,070		80	10-30-26
Jones	34- 9-6	2	620,380	2,157,450	40	1-28-27
CARTER OIL CO.						
B. Carter	24- 9-6	2	111,711		20	10- 1-26
J. Carter	24- 9-6	4	158,576		40	11-14-26
F. Carter	23- 9-6	4	362,183		40	12- 1-26
R. Cudjo	35- 9-6	3	412,060		40	2- 7-27
W. Cudjo	34- 9-6	1	43,650		40	3-27-27
Gilliland	27- 9-6	1	49,635		40	4-1-127
Grisso	23- 9-6	7	781,483		80	12- 5-26
Knappenberger	13- 9-6	3	163,962		40	1-28-27
M. Killingsworth	23- 9-6	8	589,231		120	12-28-26
Lukes	27- 9-6	3	527,348		80	12-17-26
Strothers	34- 9-6	2	397,225		40	1-11-27
Vierson	23- 9-6	4	22,053		40	
Simpson	35- 9-6	1	1,745		40	
G.F.Killingsworth	14- 9-6	3	305,280		40	1-28-27
				3,926,124		
EMPIRE GAS & FUEL CO.						
Wilson	34- 9-6	3	207,875		40	1-15-27
				207,875		
GYPSY OIL CO.						
Butler	35- 9-6	3	131,000		40	1-26-27
Carter	24- 9-6	8	575,840		80	9- 4-26
Fixico	26- 9-6	5	163,620		50	11- 6-26
Harjo	25- 9-6	2	127,425		40	1-20-27
Wolfe	26- 9-6	5	1,114,950		80	11- 9-26
				2,112,835		
INDEPENDENT OIL & GAS CO.						
P. Fixico	23- 9-6	3	67,155		40	2- 5-27
				67,155		
INDEPENDENT-GARLAND						
Fixico	26- 9-6	8	1,757,550		80	7-16-26
				1,757,550		
INDEPENDENT-INTEROCEAN						
Jones	26- 9-6	4	522,070		40	11- 9-26
				522,070		
INDIAN TERRITORY ILL. CO.						
Bowlegs	26- 9-6	9	1,295,400		120	10-22-26
Goodin	23- 9-6	4	80,075		40	1-20-27
Harjo	23- 9-6	4	224,070		40	12-31-26
James	24- 9-6	5	553,085		80	4- 9-26
Reed	24- 9-6	3	50,030		40	7-31-26
				2,202,660		
KINGWOOD OIL CO.						
Johnson	22- 9-6	5	196,765		80	3-10-27
				196,765		
MAGNOLIA PETROLEUM CO.						
Franks	25- 9-6	2	293,590		40	1- 7-27
				293,590		
MID-CONTINENT PET. CORP.						
Rentie	14- 9-6	8	712,220		120	10-22-26
Tayeche	24- 9-6	7	831,375		40	7-16-26
				1,543,595		
MID-KANSAS O & G CO.						
Pressley	3- 8-6	1	24,050		40	4- 5-27
Johnson	25- 9-6	1	47,565		20	12-22-26
				71,615		
PHILMACK OIL CO.						
Butler	35- 9-6	1	179,150		40	2- 1-27
				179,150		
PHILLIPS PET. CO.						
Strothers	27- 9-6	1	16,670		80	
				16,670		
PRAIRIE O & G CO.						
Gross	25- 9-6	5	43,400		80	11-13-26
Spencer	13- 9-6	1	3,120		10	12-23-26
Strothers	27- 9-6	5	1,275,570		80	11-24-26
				1,322,090		
PURE OIL CO.						
Strothers	26- 9-6	17	3,166,960		160	10-22-26
Strothers "B"	36- 9-6	1	990		40	4-22-27
				3,167,950		
ROXANA PET. CORP.						
Harber	22- 9-6	2	59,800		80	3- 5-27
Lashley	22- 9-6	2	11,790		40	3-10-27
				71,590		
SINCLAIR O & G CO.						
Cudjo "A"	35- 9-6	6	1,184,030		60	11- 6-26
Cudjo "B"	35- 9-6	3	1,196,155		20	11- 6-26
Fixico	23- 9-6	4	409,136		40	12-21-26
				2,789,321		
SLICK OIL CO.						
Cudjo	35- 9-6	2	133,065		40	3-21-27
Franks	35- 9-6	7	1,709,651		80	11-24-26
Giblet	35- 9-6	1	68,125		40	3-13-27
				1,910,841		
SUPERIOR OIL CORP.						
Cudjo	35- 9-6	4	891,550		40	11- 6-26
				891,550		
TEXAS CO.						
Mayhue	14- 9-6	1	16,090		160	
				16,090		
TIDAL OIL CO.						
Carter	24- 9-6	5	324,040		40	12-31-26
Fixico	26- 9-6	7	1,302,535		80	11-23-26
Harjo	23- 9-6	6	64,904		80	12-31-26
Mahardy	24- 9-6	4	923,620		40	8- 7-26
Tayeche	25- 9-6	2	365,170		40	12-17-26
				2,980,269		
TURMAN OIL CO.						
Cudjo	35- 9-6	4	367,140		40	2- 1-27
Grisso	35- 9-6	1	152,120		10	3- 1-27
Jones	34- 9-6	3	150,435		40	4- 5-27
				660,695		
TOTAL SEMINOLE		264		31,490,910	3630	8,801 bbls. per acre
BOWLEGS						
AMERADA PET. CORP.						
Rascoe	15- 8-6	7	154,353		80	3-25-27
				154,353		
CARTER OIL CO.						
Bowlegs	15- 8-6	1	107,175		40	4- 1-27
Walker	15- 8-6	1	210,375		40	3-14-27
Wise	23- 8-6	2	48,980		120	4- 6-27
				366,530		
EMPIRE G & F CO.						
Lacy	14- 8-6	1	211,037		80	3-22-27
				211,037		
GYPSY OIL CO.						
Walker	15- 8-6	3	138,637		80	4- 2-27
				138,637		
INDIAN TERRITORY ILL. OIL CO.						
Davis	13- 8-6	2	469,433		80	12-27-26
Livingston	15- 8-6	3	696,628		120	1- 5-27
Walker	15- 8-6	2	35,719		80	4-16-27
Goforth	15- 8-6	2	58,782		120	4- 5-27
				1,260,562		
SINCLAIR O & G CO.						
Adams	22- 8-6	1	4,927		20	3-25-27
Harjo	14- 8-6	2	7,851		40	4-17-27
Bowlegs	22- 8-6	1	11,921		40	4- 1-27
				24,699		
TOTAL BOWLEGS		28		2,155,818	940	
SEARIGHT						
CARTER OIL CO.						
Davis	4- 9-6	5	487,681		60	12-30-26
Frazier	3- 9-6	2	511,580		40	11-14-26
Kiker	2- 9-6	1	897		10	4- 1-27
Scott	26-10-6	1	4,905		10	3-13-27
Stewart	34-10-6	2	590,321		20	8-11-26
				1,595,384		
GYPSY OIL CO.						
Cudjo	4- 9-6	1	104,565		10	12-31-26
				104,565		
MID-CONTINENT PET. CORP.						
Grayson	34-10-6	4	1,073,734		40	8-14-26
				1,073,734		
PRAIRIE O & G C—.						
Cannon	33-10-6	1	297		10	
Carter	10- 9-6	1	21,758		10	12-10-26
Houck	33-10-6	1	415		110	4- 5-27
Kincaid	33-10-6	7	1,498,017		120	7-31-26
				1,520,487		
PURE OIL CO.						
Aldridge	3- 9-6	1	24,134		10	4- 1-27
				24,134		
SINCLAIR O & G CO.						
Polly	3- 9-6	1	72,087		10	3- 1-27
				72,087		
SEARIGHT						
Youngblood	33-10-6	2	553,482		40	5-22-26
				553,482		
TWIN STATE						
Cudjo	4- 9-6	1	19,435		10	
				19,435		
TOTAL SEARIGHT		31		4,963,308	410	
EARLSBORO						
AMERADA PET. CORP.						
Anderson	15- 9-5	3	691,075		80	3- 3-27
				691,075		
CROSBIE OIL CO.						
Bryant	9- 9-5	1	24,697		20	4-12-27
				24,697		
GYPSY OIL CO.						
Earl	16- 9-5	1	51,874		40	3-25-27
State	16- 9-5	3	1,389,346		60	11-20-26
				1,441,120		
MMGNOLIA PET. CO.						
Holmsley	11- 9-5	1	80,130		60	4-11-27
				80,130		
MID-CONTINENT PET. CORP.						
McCumber	9- 9-5	1	20,930		80	4- 7-27
				20,930		
PHILLIPS PET. CO.						
Graham	9- 9-5	1	41,613		60	4-12-27
				41,613		
PRAIRIE O & G CO.						
Baker	24- 9-5	1	4,357		80	
				4,357		
TOTAL EARLSBORO		12		2,303,922	480	
GRAND TOTAL SEMINOLE DISTRICT		335		40,913,958	5460	
				Avg. 7,493 bbls. per acre.		

Seminole District Production By Companies and Leases, Apr. 29 and Apr. 22, 1927

Company	Farm	S.T.R.	April 29 No. Wells	April 29 Prod.	April 22 No. Wells	April 22 Prod.
Amerada	Fixico	23- 9-6	4	3,241	4	3,365
Amerada	Rentie	23- 9-6	4	2,554	4	2,741
Amerada	Killingsworth	23- 9-6	4	1,426	4	1,750
Total Amerada			12	7,221	12	9,165
Atlantic et al	N. Cudjo	26- 9-6	4	1,933	3	3,261
Atlantic-Indep	Cudjo	35- 9-6	2	129	2	74
Total Atlantic			6	2,062	5	3,335
Barnsdall	Carter	24- 9-6	9	5,917	9	5,547
Barnsdall	Jones	34- 9-6	2	4,901	2	5,517
Total Barnsdall			11	10,818	11	11,064
Carter	B. Carter	24- 9-6	2	190	2	220
Carter	J. Carter	24- 9-6	4	130	4	135
Carter	F. Carter	24- 9-6	4	1,040	4	1,125
Carter	R. Cudjo	35- 9-6	3	5,320	3	5,400
Carter	W. Cudjo	34- 9-6	1	1,250	1	1,485
Carter	Knapp	13- 9-6	3	2,462	3	2,625
Carter	Killingsworth	34- 9-6	11	23,375	11	23,582
Carter	Grisso	23- 9-6	7	4,630	7	5,660
Carter	Lukes	27- 9-6	3	3,685	3	4,315
Carter	Simpson	35- 9-6	1	95	0	0
Carter	Strothers	34- 9-6	2	7,530	2	8,385
Carter	Gilliland	27- 9-6	1	1,380	1	1,990
Carter	Vierson	23- 8-6	4	3,250	4	3,790
Total Carter			46	54,607	45	58,502
Empire	Wilson	34- 9-6	3	3,970	3	4,567
Gypsy	Butler	35- 9-6	3	1,925	3	2,050
Gypsy	Carter	24- 9-6	8	3,201	8	2,462
Gypsy	Fixico	26- 9-6	5	150	5	200
Gypsy	Harjo	25- 9-6	2	1,325	2	1,290
Gypsy	Wolfe	26- 9-6	5	3,824	5	4,389
Total Gypsy			23	9,425	23	10,391
Independent	Fixico	26- 9-6	8	1,361	8	2,010
Independent	P. Fixico	23- 9-6	3	839	3	360
Independent	Jones	26- 9-6	4	879	4	1,000
Total Independent			15	3,079	15	3,370
I. T. I. O.	Bowlegs	26- 9-6	9	4,653	9	5,304
I. T. I. O.	Goodin	23- 9-6	4	615	4	651
I. T. I. O.	Harjo	24- 9-6	4	1,086	4	1,194
I. T. I. O.	James	24- 9-6	5	672	5	1,246
I. T. I. O.	Reed	24- 9-6	3	38	3	22
Total I. T. I. O.			25	7,062	25	8,417
Kingwood et al	Johnson	22- 9-6	5	4,701	5	3,603
Magnolia	Franks	25- 9-6	2	2,044	2	2,548
Mid-Cont	Rentie	14- 9-6	8	2,829	8	3,040
Mid-Cont	Tayeche	24- 9-6	7	1,265	7	1,660
			15	4,094	15	4,700
Mid-Kansas	Johnson	25- 9-6	1	910	1	1,280
Mid-Kansas	Pressley	3- 8-6	1	560	1	703
Total Mid-Kansas			2	1,613	2	1,983
Philmack	Butler	35- 9-6	1	2,020	1	375
Phillips	Strothers	27- 9-6	1	0	1	30
Prairie	Carter	10- 9-6	1	30	1	40
Prairie	Gross	25- 9-6	5	265	5	290
Prairie	Strothers	27- 9-6	5	5,450	5	6,300
Prairie	Spencer	13- 9-6	1	25	1	30
Total Prairie			12	5,770	12	6,660
Pure	Strothers	26- 9-6	17	11,956	17	13,783
Pure	B. Strothers	36- 9-6	1	425	1	120
Total Pure			18	12,381	18	13,903
Roxana	Harber	22- 9-6	2	1,796	1	338
Roxana	Lashley	22- 9-6	2	557	2	595
Total Roxana			4	2,353	3	933
Sinclair	Carter	13- 9-6	2	50	2	35
Sinclair	Cudjo-A	35- 9-6	6	1,625	6	1,225
Sinclair	Cudjo-B	35- 9-6	3	1,995	3	3,595
Sinclair	Fixico	23- 9-6	4	3,465	3	4,540
Total Sinclair			15	7,135	14	9,3495
Slick, T. B.	Franks	35- 9-6	7	3,658	7	5,032
Slick, T. B.	Giblet	35- 9-6	1	1,399	1	633
Slick, T. B.	Cudjo	35- 9-6	2	2,731	2	3,381
Slick, T. B.	Born	35- 9-6	1	0	1	50
Total Slick			11	7,788	11	9,096
Superior	Cudjo	35- 9-6	4	5,443	4	6,031
Texas	Mayhue	14- 9-6	1	105	1	100
Tidal	Carter	24- 9-6	5	3,265	5	3,180
Tidal	Mahardy	24- 9-6	4	775	4	584
Tidal	Fixico	26- 9-6	7	4,290	7	5,355
Tidal	Harjo	23- 9-6	6	540	6	740
Tidal	Tayeche	25- 9-6	2	3,960	2	4,070
			24	12,830	24	13,929
Turman	Cudjo	35- 9-6	4	3,269	4	4,222
Turman	Grisso	35- 9-6	1	1,433	1	1,548
Turman	Jones	34- 9-6	3	7,360	3	7,138
Total Turman			8	12,064	8	13,908
TOTAL SEMINOLE PROPER			264	179,442	260	194,696
SEARIGHT						
Carter	Davis	4- 9-6	5	10,390	5	11,115
Carter	Frazier	3- 9-6	2	2,830	2	3,100
Carter	Stewart	34-10-6	2	90	2	200
Carter	Scott	26-10-6	1	60	1	65
Carter	Kiker	2- 9-6	1	10	1	15
Total Carter			11	13,380	11	14,495
Gypsy	Cudjo	4- 9-6	1	1,080	1	1,157
Mid-Cont	Grayson	34-10-6	4	6,065	3	6,855
Prairie	Kinkade	33-10-6	7	7,110	7	7,325
Prairie	Houck	33-10-6	1	15	1	15
Prairie	Cannon	33-10-6	1	0	1	30
Total Prairie			9	7,125	9	7,370
Searight	Youngblood	33-10-6	2	0	2	0
Sinclair	Polly	3- 9-6	1	1,435	1	290
Twin State	Cudjo	4- 9-6	1	1,595	1	1,505
Pure	Aldridge	3- 9-6	1	950	1	1,120
Wilcox	Chupco	4- 9-6	1	565	1	30
TOTAL SEARIGHT			31	32,195	30	32,822
BOWLEGS						
Amerada	Rascoe	15- 8-6	7	11,375	8	9,430
Atlantic	Jones	16- 9-6	2	265	2	125
Carter	Walker	15- 8-6	1	3,640	1	3,865
Carter	Bowlegs	15- 8-6	1	3,845	1	4,380
Carter	Wise	23- 8-6	2	9,385	2	9,715
Total Carter			4	16,890	4	17,960
Empire	Lacey	14- 8-6	1	4,087	1	4,092
Gypsy	Walker	15- 8-6	3	5,694	2	4,856
I. T. I. O.	Livingston	15- 8-6	3	2,007	2	4,901
I. T. I. O.	Davis	13- 8-6	2	6,758	2	8,764
I. T. I. O.	Walker	15- 8-6	2	1,075	2	3,793
I. T. I. O.	Goforth	15- 8-6	2	5,202	2	4,343
I. T. I. O.	Youngblood	24- 9-6	2	6,128	0	0
Total I. T. I. O.			9	21,170	8	21,801
Roxana	Taylor	16- 8-6	1	458	1	0
Sinclair	Adams	22- 8-6	1	160	1	0
Sinclair	Harjo	14- 8-6	2	9,180	2	6,775
Sinclair	Bowlegs	22- 8-6	1	140	1	425
Total Sinclair			4	9,480	4	7,200
TOTAL BOWLEGS			34	73,735	28	65,464
EARLSBORO						
Amerada	Anderson	15- 9-5	3	9,191	3	10,308
Amerada	Cowden	4- 9-5	1	5,904	0	0
Barnsdall	Smith	15- 9-5	1	5,159	0	0
Crosbie	Bryant	9- 9-5	1	6,410	1	5,275
Gypsy et al	State	16- 9-5	3	12,347	3	13,115
Gypsy	Earl	16- 9-6	1	0	1	0
Gypsy	Bora	16- 9-5	1	0	1	0
Total Gypsy			5	12,347	5	13,115
Independent	Knappen	8- 9-5	1	1,965	0	0
Prairie	Baker	24- 9-5	1	240	1	270
Magnolia	Holmsley	11- 9-5	1	6,608	1	6,637
Mid-Cont	McCumber	9- 9-5	1	1,160	1	1,250
Phillips	Graham	9- 9-5	1	1,280	1	1,712
Philmack	Dobbs	8- 9-5	1	4,447	0	0
Sinclair	Foreman		1	0	1	0
Shallow Sand			30	4,600	29	4,300
TOTAL EARLSBORO			48	59,311	48	42,867
GRAND TOTAL SEMINOLE DISTRICT			378	344,683	361	335,849

SUMMARY

Prod. Sand	No. Wells	Production
Wilcox	300	332,353
Hunton	47	7,500
Earlsboro	31	4,630
	378	344,683
Average per well Wilcox sand		1,143.5
Average per well, Hunton Lime		164.6
Average per well, Earlsboro Sand		144.7
Average per well, entire district		930.3

This Should Help Price Of Smackover Crude

EL DORADO, ARK., April 29.—There is more than one way of playing the oil game for a profit, in the experience of an El Dorado physician. This physician, who for ethical reasons refused to allow his name to be published, moved here at the beginning of the boom days to get into the oil game. He played hard—made some money, and lost some. He still has some producing royalty, but now has resumed his practice.

Several months ago a hotel clerk here asked him what to do to prevent falling hair. The clerk was almost bald-headed. The physician fixed up a prescription, with refined Smackover crude oil as a base.

"To my astonishment as well as the patient's," the doctor said, "hair began growing again. Now that fellow has a nice head of hair."

The physician tried his prescription on others with equally successful results, he says. Without any advertising, whatever, he has received orders for his medicine from all parts of the country—from Half Way Point, Ore., from New York, from Florida and from Texas. He is planning to organize a company, advertise his remedy extensively, and hopes to beat the oil game from another angle.

Completions in N.-E. Cent., West, Panhandle and N. Texas, Week ended April 30

Company	Well Farm	Location Survey	Depth	Initial Prod.
Brown County				
Amerada	2-Henslee	Curlong	1272–1275	10
Valley	6-Texton	Curlong	1191–1209	90
Barbara	8-Metz	Marr	1352–1357	15
Hughes	4-Shore	Ryan	1291–1314	700
Hughes	7-Shore	Ryan	1291–1314	1060
Humble	4-Fry	Stubblefield	1366–1375	10
McKenna et al	5-Shore	Betts	1297–1320	900
McKenna et al	7-Shore	Betts	1315–1334	400
Rex Pyramid	13-Fry	Stubblefield	1248–1289	14
Texas	40-Lowe	Stubblefield	1295–1320	805
Janellen	2-Davis	Nixon	1190–1220	7M
Shopp	17-Byler	T&NO	T.D. 140	Dry
Spratt-Eads	1-Martin	T&TB	T.D.1403	Dry
Nelson et al	1-Boyson	ET	T.D. 870	Dry
Advance	1-Nunn	Webb	T.D. 730	Dry
Callahan County				
Tollett et al	1-Alvord	BOAL	997–1004	2½M
Oklavania	1-Haynes	BBB&C	T.D. 35	Dry
Humble	2-Hickman	I&GN	T.D.1550	Dry
Cross et al	4-Beasley	D&DA	T.D. 530	Dry
Atlantic	1-Higgins	D&DA	T.D. 812	Dry
Gump	2-Tom Lee	Comal	T.D. 535	Dry
Coleman County				
Schwab et al	1-Phillips	Atkinson	T.D.1506	Dry
Eastland County				
Gulf	8-Duffer	Mathis	3457–3498	20
Gulf	4-Duffer	Mathis	3433–3473	58
Tex-Pac	1-Higginbotham	H&TC	3533–3561	7
Cranfill et al	2-Collins	H&TC	893– 895	20
Price et al	1-McGlohin	Housin	T.D.3560	Dry
Belva	1-Dawson	House	T.D.3592	Dry
Hoffman et al	2-Lyerla	H&TC	T.D.1502	Dry
Jones County				
Gibson et al	2-Seers	TP	T.D.2612	Dry
Mitchell County				
Mestre et al	1-Hardee	H&TC	T.D.3500	Dry
Shackelford County				
Tannehill	6-Mathews	ET	1005–1014	75
Republic	3-Myers	GH&H	1001–1012	35
Albany et al	8-Reynolds	TP	1357–1361	65
White Eagle	1-Gormick	TP	1560–1577	45
Carter	6-Nail	ET	T.D.2001	Dry
Wentz	5-Proctor	ET	T.D.2200	Dry
Gleason et al	11-McGough	ET	T.D. 909	Dry
Magnolia	4-Moberly	ET	T.D.1970	Dry
Roeser et al	8-Moberly	TP	T.D.1427	Dry
Ramsey et al	1-Jetter	TP	T.D.1240	Dry
Miss. Valley	1-Manley	TP	T.D.2503	Dry
Roeser-Pendleton	1-Reynolds	TP	T.D.1545	Dry
Gwinnup et al	1-Poindexter	TP	T.D.1515	Dry
Stalker	1-Goodwin	TP	T.D.2040	Dry
Mid-Kansas	2-Goodwin	Walker	T.D.1780	Dry
Stephens County				
Lyman	1-Groseclose	LAL	T.D.3303	Dry
Milham	1-Thorpe	SP	T.D.3800	Dry
Throckmorton County				
Reiter-Foster	8-Graham	TEL	1823–1833	70
S. Young County				
Roxana	3-Payne	Smith	2070–2090	89
Stovall	5-Stovall	Tobin	3896–3902	6500
Roeser et al	1-Davis	Quad 615	T.D.3398	Dry
WEST TEXAS				
Crane County				
Humble	5-Univ.	Univ.	2860–3004	273
Humble	7-Univ.	Univ.	2909–2995	150
Independent	1-Univ.	Univ.	2836–2926	3000
Eastland	4-Univ.	Univ.	2836–2945	700
Eastland	8-Univ.	Univ.	2845–2950	3400
Simms et al	1-Collett	Univ.	2804–2956	250
Simms et al	1-Univ.	Univ.	2804–2890	950
Tidal	2-Univ.	Univ.	2820–2925	1500
Zoch et al	1-Cowden	GCSD	T.D.3461	Dry
Ector County				
Explor	1-Slater	TP	T.D.4437	Dry
Howard County				
Magnolia	8-Chalk	W&NW	1591–1592	65
Magnolia	4-Chalk	W&NW	1629–1661	90
Marland	10-Chalk	W&NW	1605–1624	40
Marland	7-Chalk	W&NW	1564–1571	50
Magnolia	1-Chalk	W&NW	1558–1570	30
Marland	6-Chalk	W&NW	1582–1596	20
Marland	3-Clay	W&NW	1824–1839	20
Marland	2-Clay	W&NW	1793–1869	25
Marland	3-Clay	W&NW	1795–1805	25
Merrick et al	1-Hooks	W&NW	1792–1825	90
Pecos County				
Mid-Kans et al	1-Yates	I&GN	1185–1223	275
Buell-Hagan	1-Univ.	Univ.	T.D.3008	Dry
Reagan County				
Texon	66-Univ.	Univ.	2874–2913	250
Texon	67-Univ.	Univ.	2916–2932	407
Texon	68-Univ.	Univ.	2952–2968	15
Texon	69-Univ.	Univ.	2922–2942	100
Upton County				
Texas	23-King	GCSD	2144–2181	12
Amerada	6	Teer	2214–2252	60
Snowden et al	1-Hughes	Teer	2326–2332	287
Independent	94-Taylor	Sapp	2060–2150	50
Roxana	19-Bowen	GCSF	2090–2164	180
Roxana	21-Bowen	GCSF	2067–2164	320
Winkler County				
Southern	67-Henricks	PSL	2915–2957	750
PANHANDLE				
Carson County				
American	6-Burnett	I&GN	3050–3055	30
Marland	7-Burnett	I&GN	3170–3200	50
Nunn & McCauley	4-Bryan	I&GN	3200–3215	200
McMan	6-Bryan	I&GN	3142–3195	100
Gulf	3-Noel	I&GN	3106–3126	1330
The Texas	1-Noel	I&GN	3230–3278	226
Gray County				
Pure Oil	3-Davis	I&GN	3180–3215	60
Texas Co	1-Osborne	I&GN	2585–2855	10½M
Humble O & R	2-Binkley	I&GN	3058–3209	200
Lipscomb County				
Amarillo	1-Masterson	DP	T.D.3192	5M
Wheeler County				
Piney JO & G	2-Clark	H&GN	T.D.2388	Dry
Magnolia	3-Johnson	H&GN	2312–2336	148
Magnolia	4-Johnson	H&GN	T.D.2460	2M
Magnolia	1-Worley	H&GN	2295–2325	32
Upham	1-George	H&GN	1825–1900	10M
Hutchinson County				
Gulf Prod. Co	39-Dial	H&OB	2945–2977	260
Gulf	4-Whittenburg	H&OB	2947–2910	205
Gulf	2-Christian	Anglin	2887–2943	32
Amarillo	1-Ingerton	H&TC	T.D.1195	50M
Amarillo	5-Bivens	H&TC	T.D.2295	75M
Phillips	23-Coble-Whit.	M&C	2959–2991	300
Barnsdall	3-Pritchard	D&SE	2742–2763	50
Devonian	8-Johnson	Whitney	2914–2960	250
American	6-Weatherly	M&C	2810–2895	250
Minnehoma et al	3-Johnson	M&C	2950–3031	1800
NORTH TEXAS				
Archer County				
Burns	8-Turberville	Carson	1458–1472	200
Staley et al	2-Turberville	Carson	1454–1480	153
Bridwell et al	1-Waggoner	H&TC	T.D.2281	Dry
Texas et al	1-Wilson	ATNC	T.D.1761	Dry
Marland	1-Wilson	H&TC	T.D.1855	Dry
Barnsdall	1-Haley	H&TC	T.D.2000	Dry
Kisk	1-Farmer	DCSL	T.D.1040	Dry
Cooke County				
McElreath et al	1-Fisher	Barnett	T.D.2073	Dry
Shasta	1-Hair	Gregg	T.D.1801	Dry
Hedrick	4-Kleiss	Littleton	1618–1635	300
Denton County				
Daniels et al	1-Wright	Nawling	T.D.2530	Dry
Montague County				
Lesh et al	1-Maddox	Arnold	920– 935	60
Dickie	1-Williams	Panola	T.D.1783	Dry
Wichita County				
Hammond	1-Boyd	Meade	T.D.1851	Dry
Seaboard et al	1-Ferguson	DL&C	T.D.1851	Dry
Wilbarger County				
Phillips	6-Waggoner	H&TC	2270–2279	22
Dannald	1-Waggoner	H&TC	T.D.2404	Dry
Young County				
Gwinn et al	1-Christian	TE&L	T.D.1303	Dry
Texas	1-Laberman	TE&L	T.D.1102	Dry
Roy Carter	1-Roman	Mauphin	T.D.1483	Dry

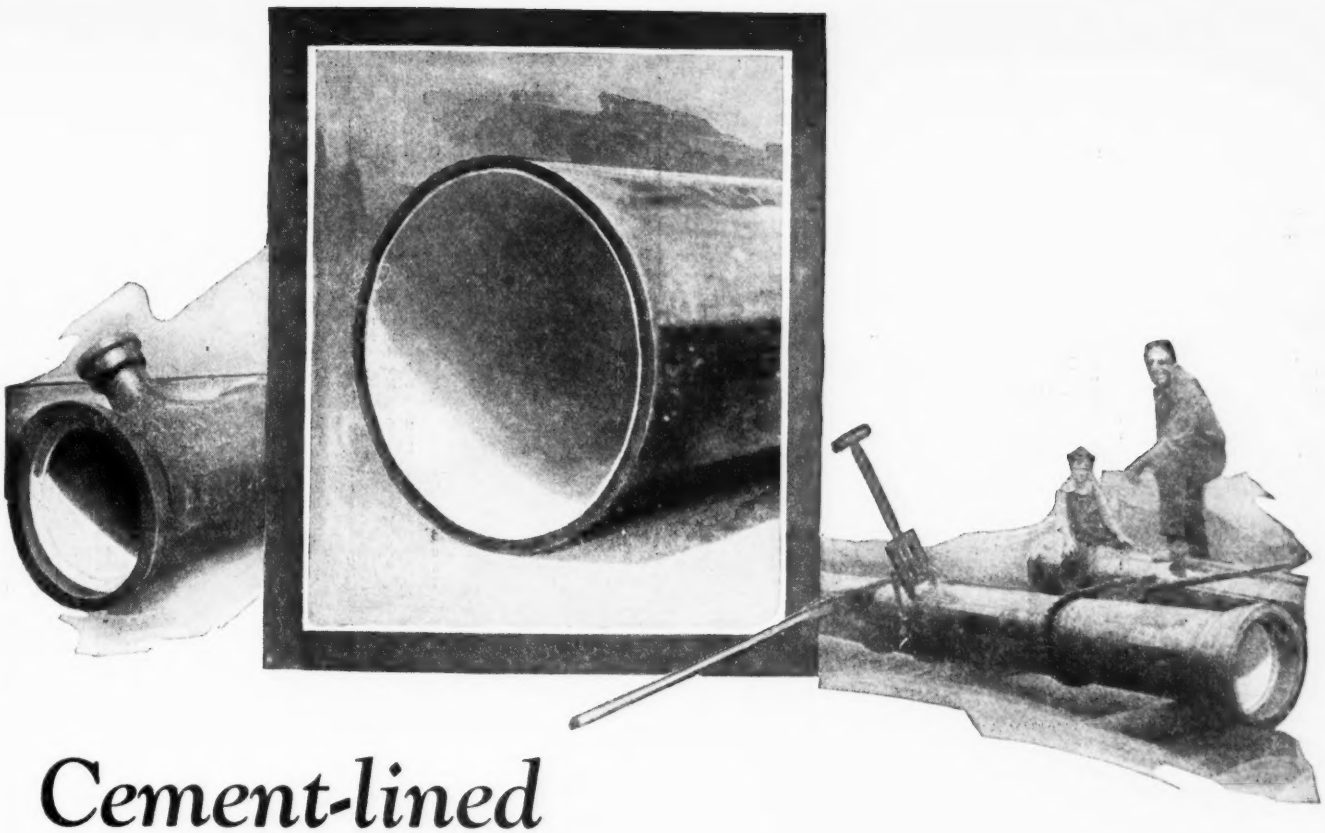
Four Graduate in June in Oil Course

NORMAN, OKLA., April 30.—The first class will be graduated next June from the school in petroleum engineering of the University of Oklahoma here. Four members of this course will receive degrees, one each in production engineering, oil field management, refinery engineering and mining engineering. There are now 67 major students in the school, and about 50 students from other schools of the university who are taking some of the petroleum courses, according to H. C. George, director of the Petroleum engineering school.

Last September 31 students from 22 other colleges entered the petroleum school with either sophomore or junior standing, Mr. George states.

Employes Hold Dinner Together

LINCOLN, NEB., April 30.—Employes of the State Oil Co. and the Lincoln Oil Co. participated in a joint dinner here recently. L. V. Surtees, Mid-Continent Petroleum Co.'s Chicago office, gave an illustrated lecture on service. Approximately 60 attended. Arrangements were made by L. B. Martin, State Oil Co., and S. A. Cornell, Lincoln Oil Co.

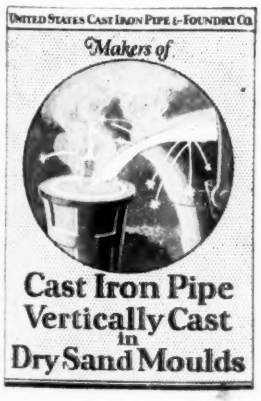


Cement-lined deLavaud Cast Iron Pipe

THE cement lining, when applied by the centrifugal method, is extremely dense and has a porcelain-like surface.

The lining adheres to the iron so tenaciously that the pipe can be cut or tapped without breaking the coating adjacent to the cut.

Moreover deLavaud centrifugal pipe, with its larger internal diameter, cement-lined by this method, has initially as great carrying capacity as ordinary pipe, nor is the flow reduced with age.



If you have any problem that involves the necessity of an absolutely non-corrosive pipe under all conditions, write to us for special literature covering the specifications, manufacture and uses of deLavaud centrifugal cement-lined cast iron pipe.

Write for details of the service we maintain for the assistance of Construction Engineers

United States Cast Iron Pipe and Foundry Company

SALES OFFICES

Philadelphia: 1421 Chestnut St.
Chicago: 122 So. Michigan Blvd.
Birmingham: 1st Ave. & 20th St.
Buffalo: 957 East Ferry Street
Cleveland: 1150 East 26th Street
New York: 71 Broadway
San Francisco: 3rd & Market Sts.
Pittsburgh: 6th & Smithfield Sts.
Dallas: Akard & Commerce Sts.
Kansas City: 13th & Locust Sts.
Minneapolis: 6th St. & Hennepin Ave.

General Offices:
Burlington, New Jersey

Completions in Oklahoma and Kansas, Week Ending April 30

OKLAHOMA

Caddo County

Company	Well No.	Location	Depth	Initial Prod.
Hudland	1	SEc NE NE 11-5-9W	2417–2423	30
Magnolia	5	NEc SE NW NW	2478–2492	10

Carter County

Humble	4	SEc SW SW 2-2-3W	3244–3355	305
Magnolia	3	NEc NW NE 3-2-3W	T.D.3013	Dry

Creek County

Magnolia	2	NEc NW SE SW 32-18-7	2250–2265	14
Murray	4	NEc SW SE 36-17-8	2755–2777	120
Savoy et al	1	Blk 2 Oakhurst	2200–2202	150
Savoy et al	1	Blk 38 Oakhurst	2207–2216	75
Commercial	1	Lot 8 Oakhurst	2245–2247	145
Margay	1	SEc SW SW 1-17-10E	2525–2530	518
Carter	2	SWc NE 12-17-10	2420–2424	170
Atlantic et al	5	NWc NE NW 16-14-10	3225–3241	35
Slick	5	SEc NE SW 32-14-10	3364–3386	175
Transcontinental	1	NWc NE SE 9-17-10	3235	Dry
Harwell	1	NWc SE 12-17-10	T.D.2891	Dry
Misener et al	1	NEc SE 17-17-11	T.D.3035	Dry
Curtis-Howard	1	NWc NE 26-16-10	T.D.3119	Dry

Garfield County

Sinclair	21	NEc SE NW NE 19-22-3W	1385–1389	50
Sinclair	15	SWc NW NE 19-22-3W	T.D.3773	Dry
Sinclair	11	C SW SW 30-22-3W	T.D.4400	Dry
Frantz	1	NEc SW 2-21-7W	T.D.3400	Dry
Penders	2	NEc SE SE 5-21-3W	T.D.3080	Dry
Penders	1	NWc 9-21-3	T.D.2300	Dry

Garvin County

Magnolia	26	SEc NW 15-1-3W	1485–1490	1½M

Grady County

Gypsy	4	NWc SE SW 16-3-5W	1706–1755	250
Carter	1	SEc 21-3-5W	2111–2117	17
Prairie	2	SEc W½ SW½ NE 21-3-5	1790–1803	300, 3M

Hughes County

Indep. et al	11	SEc SW 26-9-9E	T.D.3395 OWD	Dry
Roxana	1	NWc NE NE 23-9-9	T.D.4045	Dry
Prairie	4	SWc NW 4-7-8E	T.D.4169	Dry

Jefferson County

Magnolia	1	SEc NE NW 24-7-6E	T.D. 750	13M

Kay County

Hazel et al	3	CNL S½ N½ NE 20-27-1E	857– 865	½M
Anderson et al	1	NEc SW 31-27-2E	2465–2483	100
Marland	4	SEc NE 1-25-2W	3624–3644	1375

Lincoln County

Wilcox	1	NEc NW SW 35-14-6E	4167–4178	75

Love County

Westheimer	1	NEc NW SE 28-6-2E	T.D.4403	Dry

Major County

Texas Prod	1	SWc 36-22-14W	T.D. 200	Dry

Marshall County

Brown	1	SEc NW NW 35-5-3E	T.D.3814	Dry

Muskogee County

Williams et al	7	CEL NW NW 17-15-17	1257–1286	35
Lampton	1	NEc NW SW 9-15-18	T.D.1347	2M
Peterson et al	6	CNL SE SE 18-14-17	T.D. 600	Dry
Metzer et al	3	CSL N½ NE NE 24-14-17	T.D.1758	Dry

Okfuskee County

Champlin	3	NEc SE 15-11-11	3530–3549	135

Okmulgee County

Roberts	2	NEc SE 10-15-14E	1454–1498	5. 4M
X-Ray	1	NWc SE SE 9-14-14	1845–1901	3M
Penrod et al	2	NWc SE NE 1-14-11	T.D.3223	Dry
Nowata	1	SWc NE 28-14-11	T.D.3195	Dry

Osage County

Phillips	6	NEc SW SE 7-27-6	2950–2997	75
Tidal Osage	6	SWc NE SE 1-23-8	2408–2416	700
Sterling	10	CEL W½ S½ SE 1-22-9	2050–2054	25
Barnsdall	5	NEc NW NW 2-21-8	2512–2528	10
Continental	12	NEc SW NE 28-20-12	2027–2053	30
Marland	2	SEc 27-25-9	T.D. 73	Dry
Branstetter	1	NEc SW NE 26-22-11	T.D.1772	Dry

Pawnee County

Company	Well No.	Location	Depth	Initial Prod.
Devonian	4	NEc SE NW 35-22-6E	2662–2673	15
Rees et al	1	NWc SE 16-21-7	2235–2255	10

Payne County

Magnolia	2	NEc SW 8-18-5	T.D.3480	Dry

Pittsburg County

Quinton	1	SWc NW 21-7-17E	T.D.2650	4M

Pontotoc County

Lloyd et al	1	SEc NE 23-4-7E	1043–1046	12M

Pottawatomie County

Mid-Continent	1	SEc NE SW 9-9-5E	4358–4364	1330
Gypsy	2	SEc NW 16-9-5E	T.D.2644	Dry
Gypsy	1	NEc NW 16-9-6	T.D.4321	Dry
Gypsy	1	NEc 17-9-5	T.D.4329	Dry
Roxana	1	SEc NE 17-9-6	T.D.4450	Dry

Seminole County

Magnolia	3	SWc SE 10-9-5E	3500–3518	150
Magnolia	1	SEc SW SW 12-9-5	3417–3432	60
Barnsdall	2	NEc 15-9-5	3472–3515	5
Pure	1	NWc SE NW 3-9-6	4050–4109	2510
Carter	6	SWc NE NE 4-9-6	4165–4334	1175
Carter	3	SWc NW SW 23-9-6	4120–4147	1990
Pure	1	NWc 36-9-6	4180–4185	480
Searight et al	8	SEc SW NE 33-10-6	–4422	Dry
I. T. I. O	2	NWc SW SW 13-8-6	4226–4229	7908
I. T. I. O	3	NWc SE SE 15-8-6	4038–4060	3642
Tidal	1	SEc NW NE 9-8-6	T.D.4444	Dry

Stephens County

Comanche	1	NEc NW NE 29-2-7W	T.D.1670	Dry
Cruce	1	SEc SW NE 12-1-6W	965–1009	10
Magnolia	1	NEc SE 31-1-8W	1790–1794	20

Tulsa County

Glidden	2	NEc SE NE SW 15-19-11	2080–2152	600
Tibbens	1	SEc SW 14-18-12	1038–1042	2M
Holmes et al	1	SWc NE 20-19-10	T.D.2838	Dry
Holmes et al	2	NWc SE 22-19-10	T.D.2017	Dry
Cornelius	1	SWc SE SE 7-17-13E	T.D.2111	Dry
McCready	1	CWL SE SW 34-17-13	T.D.1893	Dry

Wagoner County

Newman	3	SEc 18-17-17E	T.D.1174	½M
Wilson	1	NWc NE NW 14-16-16	780– 818	1M

KANSAS

Butler County

Empire	82	SEc NW NW 12-26-4E	1645–1673	75
James et al	4	SWc NW SE SE 24-26-4	2660–2680	10
Johnson et al	1	SEc SW 4-27-6	3149–3158	50

Cowley County

Empire	2	SEc NE NW 6-31-6	2855–2871	25
Texas	14	SWc NW NE 6-31-6	2860–2869	25
Hull	5	NEc SE NW 15-32-4	3268–3274	1000
Patee et al	1	SEc NE NW 22-32-4	2278–2302	4M
Leighty et al	1	SWc NE 17-32-4	T.D.3357	Dry
McNabb et al	1	SWc 33-32-4	T.D.3357	Dry

Elk County

Elmwood	1	SWc 14-30-10E	T.D.2345	Dry

Greenwood County

Stark et al	1	SWc 21-23-12E	T.D.1951	Dry
Empire	17	C SE 11-22-11	1780–1851	25

Lyon County

Gasche et al	1	NWc 32-20-13	T.D.1915	Dry

Marion County

Phillips	1	NWc SW 22-17-4E	2392–2418	1000

Reno County

Sheldon et al	1	SWc NE SE 10-23-4W	T.D.4090	Dry

Rice County

Prairie	3	C SW NW 2-21-6E	3401–3432	650

Russell County

Wilcox	2	SWc NE 17-12-15W	T.D.3656	Dry
Keys	1	C NW NE 8-14-15W	T.D.3057	Dry

Sumner County

Roxana	4	CWL SW NE NW 25-31-2E	1833–1903	750

Wilson County

Allison et al	1	SWc NW 3-27-14E	T.D.1395	Dry

2 New Gasoline Jobbers For Milwaukee

MILWAUKEE, April 30.—Union Oil & Supply Co. of Milwaukee, established marketers of lubricating oils, have decided to enter the gasoline field and just finished building a half million gallons of storage. Operations will start about May 1, it is said.

* * *

MILWAUKEE, April 30.—Associated Oil Co., a new gasoline jobber, is about to start business in Milwaukee. About 90,000 gallons of storage has been built on the Blue Mound road near State street, according to a recent issue of the Thunder Bird, official organ of the Wisconsin Independent Oil Jobbers Association. This same interest now operates seven gasoline outlets in the down-town district of Milwaukee, under the name of Central Parking Stations.

TULSA, April 30.—C. C. Calvert, formerly salesmanager for the Rock Island Refining Co., has opened a marketing office in the World Bldg., Tulsa. He will handle the sales for the Rock Island Refining Co. an addition to a general marketing business.

Chicago Tide Water Man Promoted to New York

CHICAGO, April 30.—Frank J. Corcoran, since 1921 operating manager of Tide Water Oil Sales Corp. in the central region with headquarters in Chicago, has been promoted and called to New York. He has been succeeded locally by his assistant E. S. Ward. At the time Mr. Corcoran began work in this region Tide Water had eight warehouses in the central region. Now there are 44. Mr. Ward will have two assistant managers, one in Toledo, O., and one in Kansas City.

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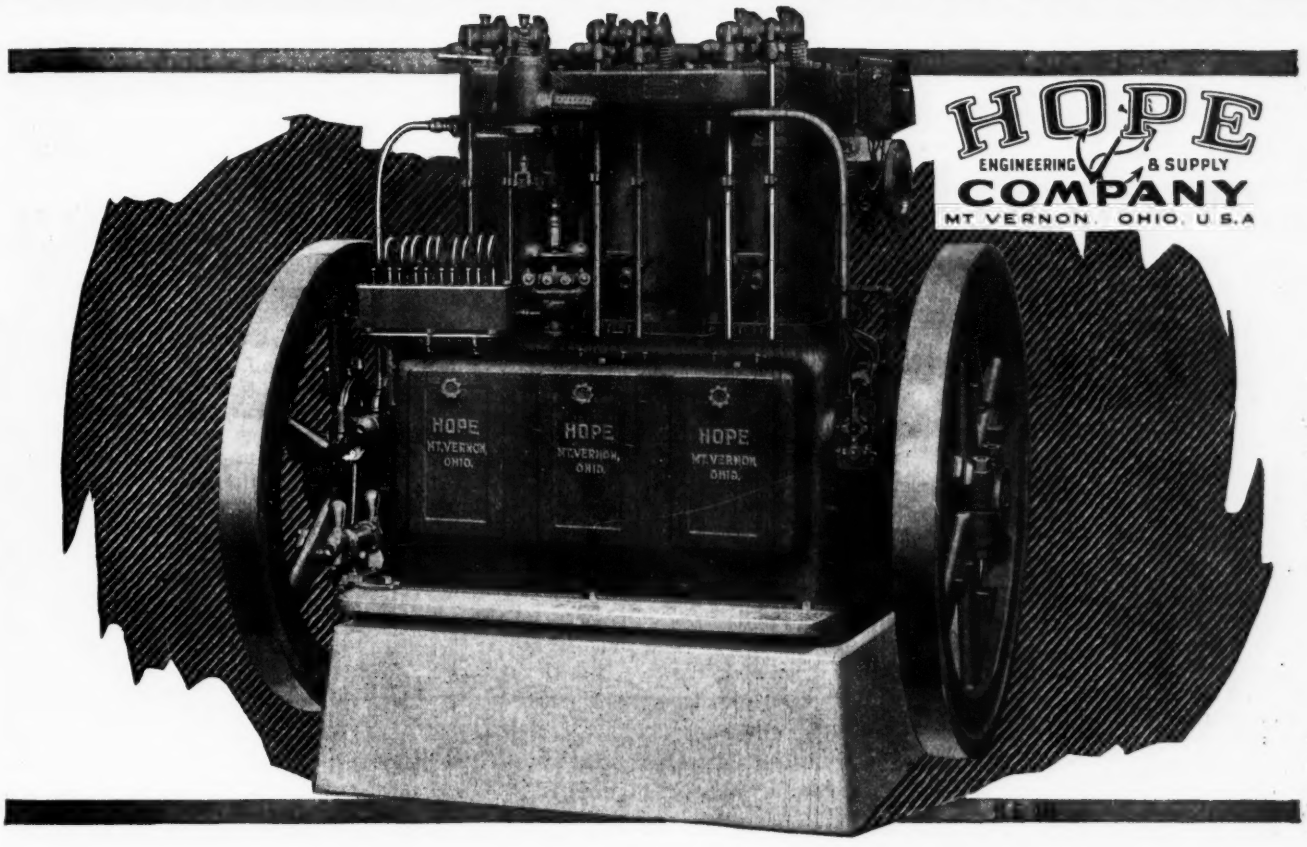

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ENGINEERS & CONTRACTORS IN NATURAL GAS AND OIL

Lower Lease and Administration Costs First Step in Production Economy

By Paul Wagner
N. P. N. Staff Writer

HOUSTON, April 28

IN periods of lower crude markets the thought of the industry naturally turns to economy. Operations in the producing industry include far more than drilling wells and lifting the oil, which represent only the physical, or mechanical, phases of production. Study of economies must, therefore, reach into other phases of production, if lower costs per barrel of oil are to be brought about.

The cost of production, in its broader sense, embraces expenditures for capital investment and administration, in addition to mechanical costs of actual crude recovery. Anything that hampers maximum efficiency in dealing with administration or capital expenditures reacts against per barrel production costs no less than excessive expense chargeable to drilling for, or lifting, the oil.

An extravagant leasing policy, or the drilling of an undue number of wildcat tests when there is no scarcity of oil, may reach the acme of inefficiency or uneconomical methods of operation. Yet, lease requirements may be such that certain properties can be protected only by drilling. It is important, therefore, to handle administrative affairs so as to allow a minimum of new work in times of industrial stress.

Each fresh discovery in areas where competitive drilling is forced by diversity of leaseholds places a burden on the industry when it finds development necessary in spite of crude market conditions. Such discoveries are encouraged by buying protection acreage, in checkerboard fashion, inside drilling blocks of wildcatters.

The wildcatter who finances test wells through acreage sales serves his own interest and aids in the search for new fields; but let no one think that the industry as a whole fails to pay the bill. In the first place, other operators or companies pay relatively high bonuses for leaseholds close in to the test. The money thus paid out is chargeable to production through capital investment. Subsequent rentals paid to defer drilling under commercial leases must be handled similarly.

If drilling is undertaken the direct charge is made against development. If leases are surrendered the bonus and rental expenditures become charge-offs that represent production costs none the less. Monthly charge-offs affecting leaseholds sometimes reach into the hundreds of thousands of dollars for the larger companies.

These companies feel they must maintain large acreage holdings in prospective areas against the time when development will be necessary to maintain their production requirements. Wildcatting in possible producing areas, therefore, forces them to buy protection acreage. In the event of a dry hole the structural data furnished by the log of the test may be sufficient to cause surrender of leaseholds; but, conversely, this same data may throw light on other desirable acreage. Hence an endless chain of capital investment is created under the head of production expense.

There exists no recognized method of getting away from this kind of expense, but when bonuses and rentals become excessive in cost it is necessary to find some way to rectify the situation.

ONE company, to the knowledge of the writer, has avoided for years the joint ownership of producing properties or drilling blocks with other operators. The company has found the present traffic in protection acreage so objectionable, however, that it now favors the purchase of percentage interests in entire drilling blocks; an operating committee to represent for development purposes the companies buying the various percentages.

It is urged, in favor of this method of buying protection, that development will be required in times of stress only to the extent of actual leasehold requirements. Competitive drilling of company against company, forcing interminable offsetting, would be avoided.

ANOTHER advantage, it is pointed out, is that a company buying percentage interests of this character is in a position to pick its operating partners from block to block.

Rapid development of drilling sites and town lots resulted in more work than economic necessity required at Burkburnett, Santa Fe Springs, Spindletop and elsewhere. Similarly, the "Block Y" area in the Texas Panhandle was over-drilled in relation to well performances and per acre recoveries. The trouble in the last mentioned instance was, however, that the peculiarities of the producing situation made desirable drilling one well to 40 acres, instead of one well to 10 acres, or less.

The writer believes it is the exception rather than the rule that too many wells are drilled in oil fields where regular spacing is practiced. It is admitted, however, that rapid development under highly competitive conditions results in too many wells being drilled at one time, taking the "gas head" off the field and forcing oil on the market in times of crude congestion. Control of entire blocks by operating committees representing percentage owners would rectify such situations and permit the eventual drilling of whatever wells proved necessary after engineering knowledge had established development requirements.

Diverse ownerships not only contribute to further crude congestion in times of over-production, but they have already made their contribution to per barrel costs at the time they figured in competitive lease buying.

The ideal condition of close control in the ownership of oil field works to the

Producing Costs Too Great

WILL a change in oil acreage values be forced upon producing companies as a result of the surplus crude production the industry is now experiencing?

How will a lowering of values at which undeveloped acreage is carried affect wildcatting in the future?

The head of one major oil company brings up these points for discussion in an open letter to National Petroleum News, published on an accompanying page. They are also taken up in the article by Paul Wagner, production analyst on its staff.

This executive is of the belief the industry must reduce its operating costs to pass through a protracted period of low prices. Of the three classes of production operating costs, first, lease operating expense; second, depreciation and general overhead expense and, third, cost of carrying undeveloped acreage as a reserve against a shortage in production, he believes the third is the one that can most practically be reduced.

This belief that abundant crude supplies are in sight for some time to come, and the doing away, through the development of the art of cracking, of the wide price differential between high and low gravity crudes, have brought up several interesting points for discussion. The accompanying presentation is a new trend but none the less important to all in the producing industry.

Reserve Acreage Carried at Too High Cost

[An Open Letter to National Petroleum News]

IT is obvious that overproduction is due to drilling, and that the overproduction of tomorrow is due to wildcatting. This wildcatting takes two forms; wildcatting for deeper sands, and wildcatting for new producing areas. While our excessive stocks above ground are due to past intensive drilling, they join in the current overproduction in bringing about the present unhappy situation, and the difficulties of the oil industry today are attributable to the mistakes within the industry itself, primarily too much wildcatting in the past and evidently too much wildcatting at the present time.

Another vital point in our present situation is that we have discovered fields from which a comparatively small amount of oil is now being produced, but which represent a tremendous potential future production. The amount of this future production is undoubtedly greater than the industry has ever had as a visible future supply, so that the present overproduction and resultant low prices are likely to be of longer duration than previously.

For this reason it is of the utmost importance to the industry that they get their producing costs as low as possible in order to pass through a protracted period of low prices, and that drilling, particularly wildcatting, be reduced to the minimum.

Producing costs are divided into three general classes; first, lifting cost, or actual expense on the lease; second, depreciation and overhead and general office expenses; third, cost of acquiring, carrying and surrendering leases, including testing as a reserve to maintain a steady production in the face of natural decline from operated properties. While these costs vary in different areas, as a general statement, each contributes something like a third to the cost per barrel of producing oil.

In an endeavor to get these costs down to meet the current low prices, there is considerable difficulty in making any substantial reduction in the lifting cost incurred on the producing property. The wells now being drilled are generally deeper and their operation necessarily more expensive than was the case some years ago. A large part of the new production has developed in areas more inaccessible, with an increased cost for material on the ground and a high cost for both fuel and water.

It is also difficult to seriously reduce the general overhead and depreciation costs. High priced modern wells result in a high depreciation charge, particularly in the case of companies whose accounting capitalizes and then depreciates the irrecoverable cost in drilling. Improvement in technique, which has made possible the present deep drilling, has required the services of more high priced engineering talent than was necessary with the shallower wells of years ago, and it has been difficult to prevent an increase in cost in general offices, not to mention obtaining a reduction.

There would seem to be an opportunity to reduce the cost of acquiring and carrying acreage. The present policy of the average producing company has been based on the theory of a shortage of crude. Such a shortage has never seemed as remote as today, consequently the acquisition and carrying of reserve acreage seems to have been pursued to an unwarranted degree as a matter of policy.

Another phase of the development of the industry has been the continuously narrowing spread between the values of light and heavy crudes, due to increase in cracking operations. It does not now seem likely that the differential between the price of light and heavy crude will ever again approach the spread which existed before cracking operations became so important, and heavy oils, or even fuel oil, competed with crude as a source of gasoline. Undoubtedly high prices have been paid for leases where it was anticipated that the production would be of light gravity, commanding a considerably higher price than low gravity crude. With the prospect that this hope will not be realized, the bonuses paid for acreage in areas producing light crude have undoubtedly been too high, and the same is also true of the carrying charges.

Probably the most pernicious practice into which producers have been led through fear of shortage has been the practice of taking protective acreage around a wildcat well. This practice has been so extensive that individuals and even companies have prospered, drilling nothing but dry holes. The practice consists in blocking up acreage, starting a wildcat well, and then selling to each of a number of individuals or companies a part of the acreage for a price which in the aggregate nets the promoter more than the cost of the total acreage plus the dry hole. This practice has cost the bona fide producers money and resulted in unwarranted and undesirable wildcatting in the past. At the present time many producers, and unfortunately generally the larger ones, find themselves with large blocks of acreage on which the carrying charges, or the leases themselves, force wildcat operations. Generally failure to drill works forfeiture, and the thoughtful producer may well consider if forfeiture is not the lesser of the two evils when he compares it to the cost of drilling the wildcat well under present circumstances, which results in a loss if it is dry, and a burden to the industry as a whole if it comes in a producer. Current statistics indicate that wildcatting has not been materially slowed up by the decline in crude prices, but there is little hope for an improvement in the general situation until the wildcat drilling shows signs of drastic curtailment.

advantage both of the landowner, the industry and the general public. It permits taking out the oil under market conditions favorable to the landowner and the operating company alike; it promotes greater efficiency and lowered per barrel costs not only from the standpoint of capital investment and administration but recovery practice also.

Based on an arbitrary producing cost of $1.50 a barrel for crude, which the writer considers a fair average applying to efficiently managed companies, recovery expense will approximate 50 cents, or one-third of the total; administration, which includes land, geological and scouting work, among other things, will account for another one-third; and lease bonuses, rentals, etc., under the head of capital investment, will take up the remaining one-third.

Regardless of whether or not company methods of production accounting conform to the foregoing distribution of costs, the expense is the same, and it is to be found somewhere if sought out and analyzed. Proportions may vary in conformity with individual policies, or unusual conditions affecting specific properties, but as applied to the industry in general a mean average will bear out the writer's assumed producing cost as a probable minimum.

It thus appears that one must look further than mechanical savings, or more economical field work, to find the solution of the producing cost problem. A 3 per cent reduction in field expense, important as it may be regarded, may represent even less than one per cent of the per barrel production cost of a company. In fact, it may be more than offset by an extravagant leasing policy or an undue toll chargeable to administration.

AN exception to the foregoing is found at Luling, where Rio Bravo Oil Co. operates two leases roughly typical of the smaller producing properties in the field. One is the Merriweather 50-acres, about three-fifths of which is productive. The other is the Maggie Moore 20-acres, all productive. Twelve producing wells on the Merriweather were giving up roundly 425 bar-

rels, net daily oil production, at the beginning of the year; five wells on the Maggie Moore accounted for about 125 barrels daily.

Original costs of the leases, which were purchased after they had come into production, plus drilling expense, well and lease equipment, tankage, etc., are charged to capital investment by the Rio Bravo. These costs are then depreciated and charged in against producing expense monthly.

Replacements, maintenance and general operating expense account for roughly three-fifths of the Rio Bravo's producing costs, as compared with two-fifths charged against depreciation in the manner mentioned. The cost of lifting and treating Rio Bravo's Luling oil approximates 45 cents a barrel when expenses belonging to the "depreciation group" are ignored.

Detailed figures show Luling production expense per barrel averaged about 75 cents for the eight months of 1926 in which costs were most nearly representative. A minimum of 62 cents a barrel was attained in one month; in another a maximum of 90 cents was reached.

In the case of the Rio Bravo, however, the figures apply to actual producing properties in a field where it has no capital investment in non-productive leaseholds and where no charge is made for general administration.

It is interesting to note, in connection with this field, that handling water produced with oil approximates nine-tenths of the bare lifting cost of the fluid recovered from the 399 wells producing Jan. 1, 1927. It is estimated that roundly 168,000 barrels of fluid was being produced daily to yield 18,240 barrels of oil.

The ratio of water to oil produced at Luling was higher than in the fields of the Mexia-Powell fault zone. The ratio was nine barrels of water to one barrel of oil at Luling and five to one of oil in the Powell field. Both producing areas are in related fault zones subsidiary to the major Balcones fracture, but they are in different geologic provinces as regards producing horizons.

The writer has no way of citing specific figures that would show capital investment and administrative charges generally applicable to per barrel production costs in either of the areas mentioned.

UNITED STATES GEOLOGICAL SURVEY, Department of Interior, found one sure way of operating producing properties at a profit, as told in the annual report of its director for the fiscal year ended June 30, 1926. That was in connection with the Red River receivership properties in the Wichita Falls district.

These properties were taken over without any capital investment, and very little administrative expense, chargeable to them under the government's tenure of operation. Net profits as shown represented sales prices for crude after deducting only labor and equipment charges against the property.

Increase in West Texas Acreage Held by Larger Operators

Company	Acres Held 12-31-1925	Acres Held 12-31-1926	Increase (Acres)
Gulf Production Co.	864,562	1,001,827	137,265
Humble Oil & Refining Co.	740,000	1,750,000	1,010,000
Magnolia Petroleum Co.	395,000	256,850	*
Marland Oil Co. of Texas	238,000	650,000	412,000
Pure Oil Co.	176,522	257,627	81,105
Prairie Oil & Gas Co.	500	58,100	57,600
Dixie Oil Co., Inc.	100,000	250,000	150,000
The Texas Co.	117,000	184,040	67,040
Roxana Petroleum Corp.	65,980	193,000	127,020
Phillips Petroleum Co.	29,760	75,000	45,240
The California Co.	185,000	435,000	250,000
Atlantic Oil Producing Co.	13,000	17,000	4,000
Republic Production Co.	41,988	50,000	8,012
Totals	2,967,312	5,178,444	2,349,282

*Decrease, 138,150 acres.

Had the government found it necessary to operate under similar handicaps of investment and administrative expense that would have been required of the individual operator, or company, the results obtained would have been different. The receiver was not concerned with extending production; merely with drilling necessary protection wells and maintaining production. The department has done no drilling, confining its work to maintaining the production, which involved re-shooting, cleaning out and otherwise keeping the wells in condition.

WITH advantages of the character mentioned, plus high market prices for crude in the receivership period, it is not strange the director of the Survey was able to say:

"An abnormal activity of the division was ended on Nov. 30, 1925, when Federal operation of the Red River oil fields, begun April 1, 1920, under Federal receivership and continued after June 30, 1924, under the Secretary of the Interior, was brought to a successful conclusion, and the operating properties and profits were turned over to lessees in pursuance of an award made by the Secretary on Sept. 1, 1925.

"Under the receiver, 2,274,634.23 barrels of oil with associated gas was produced and disposed of at a profit, after payment of government royalties as well as all other expenses, of $1,983,016.13, or $0.87 a barrel. Under the Secretary of the Interior 310,975.23 barrels of oil with associated gas was produced and disposed of at a net profit of $388,826.48, or $1.25 a barrel. The receivership period was one of drilling wells and flush production. The operations under the Secretary of the Interior began after drilling was substantially complete and involved no flush production. It is felt that unit operation of this field by the mineral-leasing division was a distinct success, the potentialities of the field having been well maintained while a material profit was being made."

A STUDY of current Texas operations shows development and lifting costs in the Panhandle will be found higher than normal, because of unusually large transportation expense affecting equipment for drilling and exploitation of wells. Lifting costs are abnormal because of the "paraffining up" of wells when the crude congeals at high temperatures. Transportation expense is similarly above normal in the west Texas salt basin area, west and northwest of San Angelo, in the direction of Artesia, N. M.

Field recovery costs have not mounted in the west Texas and Panhandle territories in proportion to capital investment and administrative expense. The last mentioned probably reach the maximum of the Mid-Continent and the southwest, because of the vast holdings of companies and what a few years ago would have been considered abnormal expenditures in bonuses, especially for protection acreage inside drilling blocks.

Three of the most extensive operators in the Texas Panhandle are known to have average per acre capital investment costs in the Amarillo territory as follows: A—in excess of $500; B—roundly $75 dollars; C—$67 plus, the figures in each case including both wildcat leaseholds and producing properties.

IN the west Texas salt basin area, for which San Angelo and Midland are operating bases, twelve of the leading operators increased their ownership of leaseholds more than two and a third million acres in 1926; at bonus prices ranging from 50 cents to $15 an acre. The average bonus price probably was close to $5 an acre, because of many lease transactions that followed significant showings in wildcat wells, or the purchase of close-in acreage after field discoveries.

The general average will not necessarily apply to individual companies, because the policy of one may be to purchase only close-in stuff at relatively higher prices as against wider activities of others in areas more remote from actual production.

Leasing, geological and scouting work in areas of this kind always goes ahead under conditions of higher than normal administration costs. No actual figures are available. As regards capital investments in leaseholds, some idea of their mounting character may be obtained by reference to the accompanying table showing holdings of 13 companies in the west Texas salt basin area.

HARTFORD, WISC.—A bulk station has just been completed here by the newly organized Ekerdt-Kroeber Oil Co. Roxana Petroleum Corp., products are being handled, according to A. J. Ekerdt.

Ingersoll-Rand High-Pressure Portable Compressors in a semi-permanent installation on Air and Gas Lift work in the Seminole field.

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Wells in all stages of production have been surprisingly benefited by the use of Gas or Air Lift Systems of pumping. Wells which have followed natural production declines to a point at which they are normally put on the pump jack or beam usually show such marked increase in production with application of gas or air lift the producer is assured of profitable returns which justify permanent plant installations.

Although such performances are being repeated weekly, no one is able to say exactly what results can be obtained from any certain well.

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New Tariffs Reduce Fuel, Gas Oil Rates From Mid-Continent Field

By J. C. Chatfield
N. P. N. Staff Writer

TULSA, April 29

SUBSTANTIAL reductions in fuel and gas oil rates from the Mid-Continent to many destinations in the marketing territory of the Standard Oil Co. of Indiana will go into effect May 20 under new tarriffs just published by railroads serving that territory. The new lower rates on fuel oil are to go into effect at the same time as the new light oil rates, which are to be largely increases from Oklahoma refining points.

When the Interstate Commerce Commission decided the 1925 Mid-Continent oil rate case giving Kansas (Group 2) and Kansas City (Group 1) refiners differentials under Oklahoma (Group 3), the Commission decided that heavy oil rates should be 80 per cent of the gasoline rates in all instances, instead of a flat 6 cents per hundred lower.

Under this ruling fuel oil rates will be unchanged to all points where the light oil rate is 30 cents per hundred pounds since 80 per cent of 30 cents is 24 cents.

To points where the gasoline rate is less than 30 cents the fuel oil rates will be somewhat higher after May 20; while to all points where the rate is above 30 cents the rates will be decreased. Table No. 1 gives present and proposed fuel oil rates from Kansas and Oklahoma to 18 key points in Western Trunk Line Territory which were set up by the Commission in the 1925 case.

The table gives also new fuel oil rates from Oklahoma to two Indiana points. The rates to Indiana destinations were not involved in the 1925 case but the Interstate Commerce Commission revised its finding in the Indiana State Chamber of Commerce case, Docket 14,087, on May 10, 1926, requiring the railroads to follow the 80 per cent ruling to that state, as well as to Illinois and points west of the Mississippi river.

DUE to the fact that Kansas refiners will have differentials under Group 3 to all points in the territory involved after May 20, the Kansas shippers will receive greater reductions in their fuel oil rates than the Oklahoma refiners. Reductions in Kansas rates run from ½ cent to 7 cents per hundred pounds and there is an increase of 2 cents per hundred to the Kansas City territory and a one cent increase to Dubuque, Iowa, while rates to four of the key points will not be changed.

In the case of Oklahoma heavy oil rates are reduced from ½ cent to 5½ cents per hundred to 8 of the 18 key points, are to be unchanged at two points and increased from ½ to 2½ cents per hundred pounds at 8 of the points. To the two Indiana destinations shown in Table No. 1, fuel oil rates from Oklahoma will not be changed.

The new tariffs publish refined oil rates from Kansas City and Kansas refineries to Indiana state destinations with differentials in line with those ordered by the Commission in the Western Trunk Line case. Oklahoma rates to Indiana destinations are not changed from those which went into effect on Dec. 26, 1926, as a result of the Commission's revised decision in the Indiana State Chamber of Commerce case.

Since the Commission fixed reasonable maximum rates from Group 3 to Indiana destinations in that case, the railroads were forced to cut their rates from Kansas and Kansas City to Indiana in order to give the latter two groups their differentials under Oklahoma. In the Western Trunk Line case the Commission set up reasonable maximum rates from Oklahoma, but did not require the railroads to raise the Oklahoma rates to that level. The carriers had the option of lowering Group 2 and Kansas City rates or raising Oklahoma. As was generally expected the carriers chose to raise the Oklahoma rates to the maximum figure set up by the Commission.

TABLE No. 2 gives present and proposed rates on light oils from Kansas City and Group 2 to 14 destinations in Indiana with the amount of the change. In every case the Kansas refiners will have a flat reduction of 2 cents per hundred pounds. From Kansas City, however, the reduction ranges from 2½ to 6 cents per hundred.

Oklahoma refiners are seeking to overthrow the new rates before they become effective because of the differentials given Kansas and Kansas City refiners. They are expected to file an injunction application in federal courts, have already filed an application for a rehearing before the Interstate Commerce Commission and are expected to ask for investigation and suspension of the new tariffs. No complaint is made against the new rates by Kansas and Kansas City interests.

Table No. 1

Present fuel and gas oil rates from Kansas and Oklahoma refineries to 20 key points in the Middle West, compared with new rates based on 80 percent of the gasoline rates. The new rates become effective May 20. All figures in cent per hundred pounds.

	From Kansas (Group 2)			From Oklahoma (Group 3)		
Destination City	Present	Proposed	Change	Present	Proposed	Change
Kansas City, Mo.	14	16	plus 2	20.5	21.5	plus 1
Des Moines, Ia.	24	23.5	minus 0.5	26.5	26.5	none
Cedar Rapids, Ia.	27	26.5	minus 0.5	28	28.5	plus 0.5
Ft. Dodge, Ia.	27	27	none	28	29	plus 1
Mason City, Ia.	32	29	minus 3	34	30.5	minus 3.5
Omaha, Neb.	24	23.5	minus 0.5	27½	26.5	minus 1
Lincoln, Neb.	24	23.5	minus 0.5	27½	26.5	minus 1
Sioux City, Ia.	30	27	minus 3	33½	29	minus 4.5
Sioux Falls, S. D.	37	30.5	minus 6.5	37	32	minus 5
St. Paul, Minn.	37	32	minus 5	37	33.5	minus 3.5
Duluth, Minn.	43	36	minus 7	43	37.6	minus 5.5
Dubuque, Ia.	28	29	plus 1	28	30.5	plus 2.5
Wausau, Wis.	38.5	35	minus 2.5	38.5	37	minus 1.5
St. Louis, Mo.	24	24	none	24	25.5	plus 1.5
Keokuk, Ia.	25	25	none	25	27	plus 2
Peoria, Ill.	27	27	none	27	29	plus 2
Chicago, Ill.	30	29.5	minus 0.5	30	31	plus 1
Milwaukee, Wis.	33.5	32	minus 1.5	33.5	33.5	none
Terre Haute, Ind.	31	29.5	minus 1.5	31	31	none
Indianapolis, Ind.	33	31	minus 2	33	33	none

Table No. 2

Present light oil rates from Kansas City, Kansas and Oklahoma refineries compared with new rates to Indiana state destinations which will go into effect May 20, as a result of a modification of the Interstate Commerce Commission's decision in the Indiana State Chamber of Commerce Case. All figures in cents per hundred pounds.

	From Kansas City (Group 1)			From Kansas (Group 2)			From Oklahoma* (Group 3)
Destination	Present	Proposed	Change	Present	Proposed	Change	Present
Terre Haute	35.5	32	minus 3.5	39	37	minus 2	39
Princeton	35.5	32	minus 3.5	39	37	minus 2	39
LaFayette	38.5	32	minus 5.5	39	37	minus 2	39
Greencastle	38.5	32	minus 5.5	39	37	minus 2	39
Logansport	38.5	34	minus 4.5	41	39	minus 2	41
Indianapolis	38.5	34	minus 4.5	41	39	minus 2	41
La Porte	42	36	minus 6	43	41	minus 2	43
Marion	42	36	minus 6	43	41	minus 2	43
Muncie	42	36	minus 6	43	41	minus 2	43
Elkhart	42	38	minus 4	45	43	minus 2	45
Ft. Wayne	42	38	minus 4	45	43	minus 2	45
Richmond	42	38	minus 4	45	43	minus 2	45
New Haven	42	39.5	minus 2.5	46.5	44.5	minus 2	46.5
Butler	42	39.5	minus 2.5	46.5	44.5	minus 2	46.5

*No change is to be made in Oklahoma rates to Indiana destinations.

You'd Stop This!

YOU'D stop a leaking oil spigot quick enough. Then why not stop the leaks that are equally costly—excessive repair bills, extra hours on the road, trucks scrapped before their time. These leaks can be prevented—by putting your trucks on Budd-Michelin Dual Wheels.

"Budd Duals save us 3½ trucking hours out of every 10." (*Mushroom Trans. Co., Kennett Sq., Pa.*)

"Budd Duals cut our tire cost 25%."
(*Mellway Brothers, Toronto, Can.*)

"Our repair bills are negligible since we changed to Budd Duals."
(*Coogan's Lakeshore Delivery, Dunkirk, N. Y.*)

Apply these lessons to *your* delivery service. If you can cover 10 miles to every 6 you cover now you're going to sell more oil—and need fewer trucks to do it . . .

If other truck owners can cut their tire costs by using Budd Duals, *you* can . . .

If Budd Duals are making repair and maintenance costs negligible for others, they will do it for *you*—and they will prolong the life of your trucks way beyond normal.

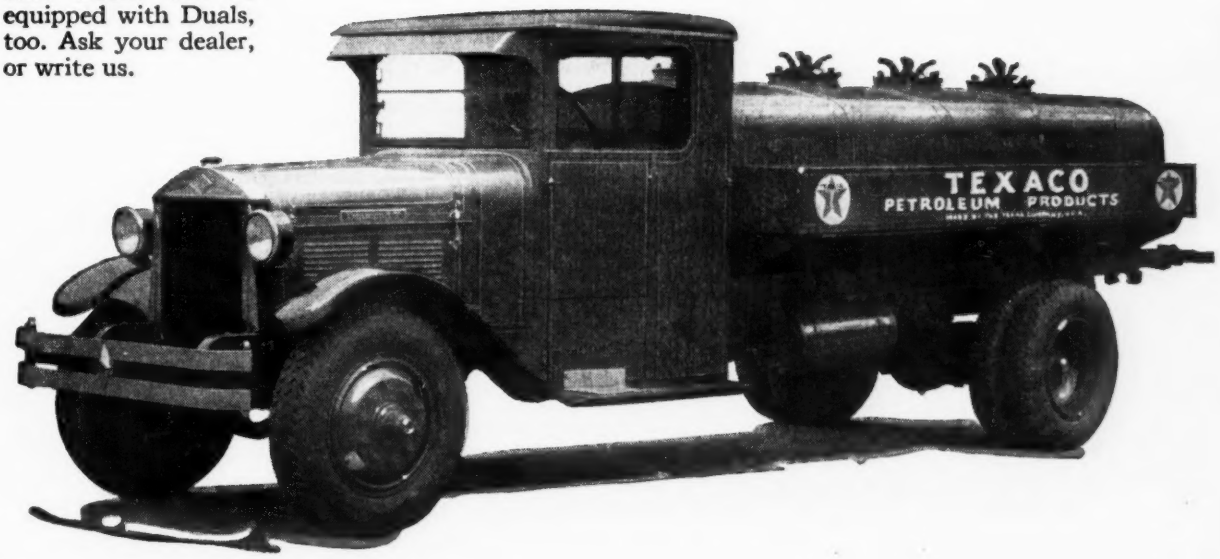
These savings are worth going after!

YOU CAN GET BUDD DUALS on any make of truck. All manufacturers supply them, either as standard or as optional equipment. Your present trucks can be equipped with Duals, too. Ask your dealer, or write us.

BUDD

WHEEL COMPANY

Detroit



Heat Exchange in Refineries Improving; More Work Still to be Done

By Howard H. Greene
Kendall Refining Co., Bradford, Pa.

Presented at National Petroleum Association Meeting, Cambridge Springs, Pa., April 29

IN browsing through a popular handbook of the petroleum industry recently, I ran across the following definition of heat exchange: "Heat exchange is commonly known as a system of heating oil, water or gas by absorbing the heat from some medium that must be cooled." Reading further I was confronted with this statement, "The distillation process such as used in oil refinery practice offers unusually good opportunities for the use of heat exchange equipment."

Let me say right here that a great deal of refinery condenser and heat exchanger practice is still carried out by "cut and try" methods, but this condition is being steadily remedied and the very crude methods of heat recovery are rapidly being replaced by more efficient apparataus which has proven so successful in those refineries that have realized the importance of heat conservation.

In this day of keen competition, of price cutting and of demoralized markets, it is of tremendous importance to the refiner that he give the matter of conservation his closest scrutiny and application. I reiterate my earlier statement that no where does heat exchange equipment lend itself so admirably to substantial economies as in an oil refinery. Do not misunderstand me! In the distillation of petroleum there are other pieces of equipment which are just as much heat exchangers as a liquid to liquid heat exchanger or a vapor to liquid heat exchanger. For instance the old shell still or the modern pipe still are both heat exchangers from the gases of combustion to oil through the shell of the still or the pipes in the pipe still. However, as proven recently by one of the member companies, it may amount to the difference between 34 pounds of coal to the barrel of oil charged to the old batch still as compared with 12 pounds of coal to the barrel of oil run through a modern pipe still, not to say anything about the improvement in the quality of the finished oil.

As certainly as I stand before you today, this huge and intricate industrial battle in which we are engaged must eventually gravitate to the end of the survival of the fittest. No one concern has a monopoly on all the best brains. Conditions within the industry today are but a clarion call to those who have vision and will act.

More practical progress has been made in heat conservation during the past quarter century than any other branch of power economies. Most of this work has been directly due to the efforts of engineers in power plants and oil refineries. Perhaps our good friend, Mr. Ross, the capable power plant engineer may question giving a great deal of credit to refinery engineers. Many power plant men consider that refinery practice still lacks "refinement" in the matter of heat conservation and point to practices in refinery work which they would consider criminal waste.

IT is perhaps true that fewer heat units are wasted in power plant work than in refinery practice. But this is largely due to the multitudinous difficulties faced by the refinery engineer.

The power plant man knows the constants of steam exactly. His use of steam is bounded by narrow limits. The refinery engineer has wider and more inexact uses for heat, and to this difficulty is added his dealing with vapors of varying latent heats under conditions which are constantly changing.

Even under these conditions the best refinery practice is closely approaching power house efficiency in the matter of possible heat conservation. Refineries are today operating on a small fraction of the fuel once used in the older wasteful processes. The rapid strides of the past few months in refinery heat conservation augurs fair to make the next two or three years tremendously important in heat exchange development.

Those of you who were fortunate enough to take the inspection trip on April 8th thru the modern Petty Island plant of the Crew-Levick Co. know what I mean. There, I am told, they have a modern continuous battery of stills with efficient heat exchange equipment and all on a plot of ground many times smaller than that required by a battery of old type batch stills. Also, and here is the most important thing to my mind, the only place water is used on the entire battery was in a small condenser on the gasoline stream. All other overheads cuts are condensed by the use of the incoming charging stock thru the proper utilization of heat exchange equipment.

In many of the older refineries it is a pertinent question to ask whether or not it is desirable to add modern heat exchange equipment to an inefficient still battery or to build an entirely new unit using the modern pipe still as the primary source of heat and with efficient heat exchangers mounted closely together to minimize heat losses and permit the use of automatic control to a large extent. Often the old battery with some minor changes and additions can be revamped with comparatively small expense to secure the desired results.

In a treatise of this kind it is obviously impractical to cite actual examples of economies effected thru the utilization of heat exchange equipment unless every condition is given. The work that an exchanger is required to perform is directly related to the type of charging stock, fractionation, tpye and number of stills, liquid surface, bottoms and other variables which makes it readily apparent that before possible economies can be determined a careful survey must be made. In many instancces too, there is a question of gums, sediment or residue adhering to the tubes, which necessarily involves the provision for cleaning facilities if efficiencies of rating are to be maintained.

REFINERY engineers are agreed upon there being no real reason why exchanger equipment should not get at least 60 per cent to 70 per cent of heat from the vapors and residual in petroleum distillation. Ordinarily the average exchanger is most economical when recovering 80 per cent of the available heat. Its capacity is almost directly increased with an increase in the velocity of the fluid. However, the pumping cost increases much faster than the increase made possible in the velocity of the fluid. Hence the reason for the economic range centering around the 80 per cent point.

It is important to keep in mind that the steam used in distillation gives up approximately 950 B. t. u's per pound when condensed whereas oil vapors give up around 125 B. t. u's. It logically follows that only enough steam whould be used in the distillation to secure the results desired. Many of the larger plants have recently capitalized on this fact, coupled with the fact that oil vapors condense at a higher temperature than steam vapors, by placing steam jet thermo-compressors on stills using quantities of steam. This arrangement may be briefly described as follows:

The mixture of steam and oil vapors leaving the still, flows to the condenser where water is used as the condensing medium. The oil vapors condensing first at the higher temperatures permits the steam being withdrawn and supplemented with sufficient live steam to boost the pressure and return to the

still. A double saving is thus effected, first there is a substantial saving in live steam used thereby improving the overall economy of the still, and second the reduction in the condenser duty results in a material reduction in the quantity of cooling water required.

I believe that the next decade will see even greater application and development in th use of heat exchangers in petroleum refining. If the foregoing will in any way be the means of creating renewed interest in the subject of conservation water and heat exchange in refineries then, the purpose of this treatise will not have been lost.

Chart Shows Retail Gasoline Prices

Chart designed to display at service station showing cost of various amounts of gasoline at varying prices

JACKSON, MICH., April 30.—Andrew J. Callaghan, American Oil Corp., Jackson, has designed a novel price chart for use at retail filling stations and is considering manufacturing them.

A sample plate of the price chart is shown here in miniature. Its circular form has an advertising value. This plate would be for use when the filling station price was 20 cents a gallon. The price of all fills from one to 20 gallons is figured out for the attendant and placed in plain view of the customer. As the cut shows, spaces are provided for company advertising, the posted prices and the tax can be plainly shown.

In order to take care of all gasoline prices, as they are made in Standard Oil Co. of Indiana territory, a full set of price charts would consist of 80 cards printed on both sides covering all gradations in price of 0.1 cent between 15 and 30 cents a gallon. The oil station superintendent will keep these cards filed numerically (the price being the serial number) so that he can change his price posting a minute after receiving news of a change.

Crystal To Market Skelly Oil

SHREVEPORT, April 29.—A contract has been signed by the Crystal Oil Refining Corp. here for the exclusive distribution in the states of Arkansas, Louisiana and Mississippi, of Tagolene motor oils, manufactured by the Skelly Oil Co. of El Dorado, Kansas. The Crystal corporation also will handle the oils at its service stations in Shreveport and vicinity.

"DEFIANCE"

A Good Combination

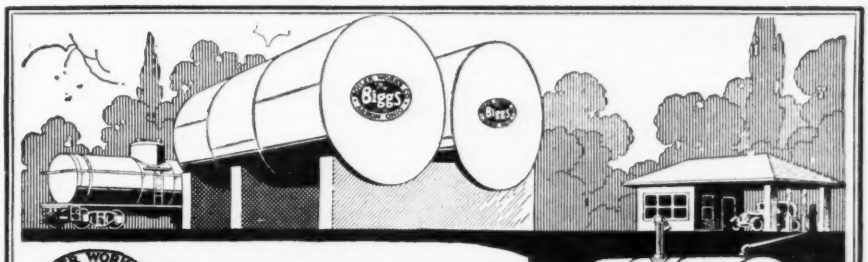
If a barrel doesn't "stand-up", all the care and money spent on the contents of that barrel are jeopardized.

You are very careful in the manufacture of the products that bear your name. The condition in which these materials reach the customer depends upon the shipping package.

We use the same care in making Defiance Steel Barrels that you do in making your products.

Your products in a Defiance Steel Barrel make a business building combination.

The American Steel Package Co.
Defiance, Ohio



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Bulk Storage and Station Tanks

FORTY years successful experience; plant fully equipped for fabricating plate up to 1½" thick. Your specifications and inquiries are invited.

Pressure Stills for Cracking Process - Fractionating Towers - Dephlegmating Towers, Bubble Towers - Heat Exchangers - Agitators - Steam Stills - Crude Stills - Condenser Boxes, Run Down Tanks - Blending Tanks - Hemispherical Tanks - Blow Cases - Acid Tanks, Compounding Kettles - Storage Tanks to 80,000 Barrels - Smoke Stacks and Breechings, etc.

THE BIGGS BOILER WORKS CO., Buchtel and Bank Sts., Akron, O.; 300 Madison Av., New York

Mutual Understanding and Fairness Mean Good Business

By Frank Berry
James B. Berry's Sons Co., Oil City, Pa.

Delivered at National Petroleum Association Meeting, Cambridge Springs, Pa., April 28

MY connection with the industry is largely that of a buyer or seller, rather than that of a manufacturer. I would not presume, therefore, to say how some troublesome practices may be best corrected, but am just going to point out a few of them.

There is no doubt in my mind that cylinder stocks at the present time are the most difficult products to handle satisfactorily, but before going into this I would like to say a word of praise for our committee on standards and tests—for the good work they have done and are doing in standardizing tests. Perhaps most of the difficulties now encountered are largely due to the human element which enters into the making of these tests, particularly the flash and pour tests.

There was a time when it was not uncommon to buy and sell 600 and 650 Pennsylvania cylinder stocks on fire test alone, and the jobber apparently took for granted the other tests would be satisfactory—but not today—for now certain flash, pour, viscosity, tar and carbon tests must be met—and if for export the Holde test for hard asphalt is required—and right here is a point for discussion, for as far as I can learn very few of the Pennsylvania refiners care to make the Holde test, with the result that these stocks must be sold on samples and the assurance of a representative sample is sometimes uncertain, so that even this manner of handling is not entirely satisfactory.

Furthermore, it involves considerable time and unless the quotation is withheld until the sample is approved a loss may result—particularly in a fluctuating market.

In passing on to the regular bright stocks and long residuum bright stocks, most trouble seems to be encountered in determining the exact color. I believe the Union colorimeter has been adopted as the standard, but apparently it is not universally used.

There are two grades of E filtered stock manufactured in the Pennsylvania regions—the Warren and the Oil City—and so far as I can ascertain the Warren E corresponds with the E colors adopted by this association but there is a great deal of controversy in the trade determining just what the Oil City E color should be.

Very frequently controversies arise between the buyer and seller due to carelessness and negligence in loading and unloading cars, and it is very essential that the men in charge of this work follow out instructions—such as seeing the valve is seated properly, that the double or lock nut is on the bolt that goes through the rod; also to make certain that cars are well cleaned—particularly after having hauled heavy or dark material; and it is very necessary that both buyer and seller use great care when measuring outages.

Kerosene and fuel oil are comparatively easy to handle, but gasoline is a different problem, for the initial, intermediate points, endpoint and corrosion test are to be dealt with and inasmuch as U. S. Motor specifications do not include gravity, and allow as dark as 16 color, these points must be watched, providing that the customer has been in the habit of buying 58-60 gravity and water white color.

Quite frequently the phrase "good color and sweet" is specified on gasoline orders, and, looking at it from a technical standpoint, we can recognize the origin but most customers take a literal meaning and it is surprising to note the controversies that arise in determining just how fragrant or sweet gasoline should be.

Let us now refer to a few of the details of oil trade practices which I believe deserve some consideration:

Is not it much better to sell material f.o.b. refinery, freight allowed destination, instead of naming a delivered price?

When buying or selling is not it more satisfactory to specify the gallonage rather than a certain number of tank cars?

Is not it imperative that the right of the seller be upheld by insisting that all complaints and outages of material should be adjusted before unloading?

Is it good practice to sell at a specified price with a guaranty against decline, or countenance the willful breaking of contracts?

Is it right to allow discounts to be taken 15 or 16 days after date of shipment when terms are 1 per cent 10 days or 30 days net?

Is it good policy to encourage buyers to reverse telephone calls and wire collect?

Is not it poor business to make a general practice of allowing unfilled orders to remain open on our books after expiration of date of shipment? Is not it always better to cancel at the time or make some satisfactory adjustment and extend time of delivery to another specified date?

Briefly, my personal conception of a successful and pleasant transaction is when both buyer and seller have the proper knowledge of the material being handled—with a thorough understanding of the grade and specifications; size of car; time of delivery; destination; railroad delivery; terms, etc.—combined with an earnest effort and desire to faithfully fulfill their respective part of the agreement. A transaction of this kind causes very little trouble or expense; creates a friendly spirit between buyer and seller and usually encourages new business.

Oil trade practices or ethics should not be unlike those of any other legitimate business and we all know the only way we may expect to build up a business and hold it is by dealing fairly.

Variety of Services Aim of New Station

MIDDLETOWN, CONN., April 30.—"Getting a chance at them for gasoline and oil by concentrating the automobile service business into one location" is the idea of The Red Wing Gas Co., as expressed by G. E. Meech, president, in planning a complete service for automobiles at its service station here.

Not only will five different grades of gasoline be handled, along with motor oil, but cars will also be oiled, greased and washed. Modern brake service will be given. A tire and battery business will be operated as well as a repair and paint shop.

With these services in mind, the company has purchased four acres of land in order to allow for expansion, according to Mr. Meech.

Four tanks of 3000 gallons capacity each are being installed for lubricating oil, and four additional underground tanks of 22,500 gallons each will be installed soon for gasoline. Four automatic air scale towers are also being installed, permitting 14 cars to be served with air at the same time. The Farr hydraulic system is being used and four draw-offs have been added in order to serve eight cars simultaneously.

The station building, 60 by 100 feet, is made almost entirely of glass, 175 feet of which is plate glass, for exhibiting cars. This building will house three special automobile services. One of these services is the washing of cars, for which purpose two systems will be used, steam and compressed air and water, and a modern brake service, which will employ a brake testing machine.

J. V. Throop's Mother Dies

WATER VALLEY, Miss., April 28.—Mrs. J. H. Throop, of Evansville, Ind., mother of J. Vail Throop, of the J. V. Throop Petroleum Co., Kansas City, Mo., who is well known in oil jobbing circles, died recently at the age of 71 years.

J. V. Throop and another son, J. S. Throop, salesman at Water Valley for the Gulf Refining Co., New Orleans, La., were at the bedside when Mrs. Throop passed away. She was buried in Evansville.

Besides the two sons Mrs. Throop left one daughter, Miss Mary D. Throop of Evansville.

The final cost of oxwelding

The success of the oxy-acetylene process and the remarkable growth in the extent and variety of its applications are convincing testimony that oxwelding is economically sound.

It is not possible that one gas company after another should have adopted oxwelded pipe lines unless there were both economy of installation and economy of upkeep. Plant after plant would not have standardized on oxwelded tanks and welded equipment if it were not sound operating policy. Thousands of engineers and operating executives sponsor the oxy-acetylene process by using it.

The final cost of the gas-welded joint, because of its greater ruggedness, longer life and elimination of maintenance, is always lowest.

Prest-O-Lite

DISSOLVED ACETYLENE

22 years old and still growing

THE PREST-O-LITE COMPANY, INC.
Unit of Union Carbide and Carbon Corporation
General Offices: Carbide and Carbon Building
30 East 42d St., New York
31 Plants—101 Warehouses

BUILT to a REPUTATION—
for above or underground service

25,000 Gallon Two Compartment, 10'6"x38'9" Rivet Weld Type

STANDARD TANKS are sold at a price that is consistent with a quality product and the experienced buyer of STANDARD tanks knows that he will get only what is worthy to carry the name of STANDARD.

STANDARD TANKS are made in all welded, rivet weld, close riveted welded or caulked types of capacities from 65 gallons to 25,000 gallons. Correct in design and of best materials and workmanship. All STANDARD tanks have flanged and dished heads and are pressure tested. They are guaranteed for service and durability.

If it is a Standard Tank you know that it is a Good Tank

THE STANDARD BOILER & PLATE IRON CO.
NILES, OHIO

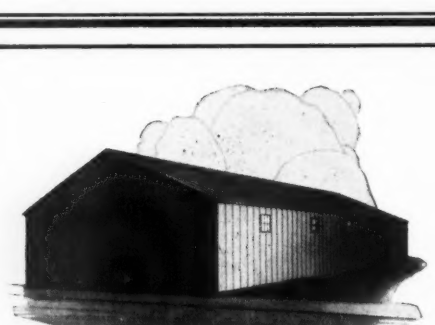
Oil Price Handbook

RECENT crude and tankwagon price changes have caused many an oil man to study prices prevailing a year ago at this time.

What was Mid-Continent crude a year ago today? Or, what was 58-60 U. S. Motor gasoline in Oklahoma? Or, the tankwagon price of gasoline a year ago? These are some of the questions you are asking yourself right now.

You can get the answers most conveniently, rapidly and accurately in the OIL PRICE HANDBOOK for 1926. It contains the refinery, tankwagon, crude prices and export markets for the entire year 1926 as published in the weekly issues of National Petroleum News. 146 pages, cloth bound, marginal index—price $5. Send for your copy *today*.

NATIONAL PETROLEUM NEWS 812 Huron Road Cleveland, Ohio



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Meet the steel building needs of the whole oil industry

Light, Rigid, Strong and easily erected.
Write for complete Catalog No. 7

MARION MACHINE, FOUNDRY & SUPPLY CO.
MARION, INDIANA, U. S. A.

Letters to the Editor

Editor, NATIONAL PETROLEUM NEWS:

I cannot resist the temptation to comment upon your article in the April 6 issue of NATIONAL PETROLEUM NEWS, entitled, "Thorough Knowledge of Tank Car Market Would Help Buyer and seller." I was one of the few buyers who attended the meeting in Kansas City last month. By the term *buyers*, I refer to individuals devoting 100 per cent of their time of buying refined products, the re-sale of same being in the hands of others, and I am sure that these buyers caught and understood a great many of the significant statements made at that time. The absence of any reference to export sales or buys was noticeable, although this movement represents a large percentage of Mid-Continent refineries' output.

Your example of the sale of shares on the stock market is excellent, and you would probably be surprised to know how closely this procedure is followed by large export buyers, except, of course, in the reverse. Nevertheless, I can assure you that this company, as well as any other exporting concern who are also engaged in the manufacturing of refined products, is very careful not to attempt buying under the market. It could be readily seen why the management would not permit one department to break or attempt to break the market on which their own material would have to move later on. It is equally true, an intelligent buyer would endeavor to accomplish the purchase of a large order, which quite often consumes several days by endeavoring not to excite the market unnecessarily in the same manner as a broker would proceed to sell stock.

An efficient and honestly compiled record of the prices of refined products could in no way be fairly construed as a detriment to the industry. It is the abuse of this record that tends to maintain a downward trend in prices, and reminds me of one of the recent advertising slogans, "—Even for Lazy People." A refiner or sales manager who contracts a large percentage of his output on such a record is merely following the line of least resistance prompted by his lack of confidence in his ability to sell on the open market, or by safe guarding his position, or through pure laziness.

The motive of following the line of least resistance is tempting to all of us, and in some instances are the result of managerial instructions to reduce sales expenses, such as telephone, telegraph, etc. The second motive allows the sales manager to go before his superiors or board of Directors and display the record and proudly claim that their material has been moving at the market price as proved by Platt's Oilgram. His

superiors, in many cases some of the keenest minds in our country, fail to realize that Platt's Oilgram is only an additional proof of the sales department's inefficiency. I need make no comment on the laziness since it really embodies the other two.

Platt's Oilgram, or any other honest record of daily prices, cannot increase or decrease prices one fraction of a cent. It is merely a public report of the prices made by the refiners themselves. I gathered from the meeting in Kansas City that the majority of refiners would not, or at least did not like to, base their prices on the Oilgram, the implied reason being that they were too slow. I can assure you that no exporter would buy products on the Oilgram for the reason that they consider they can always buy under it. And consistently do. It would seem, therefore, that the Oilgram is somewhere between these two ideas of the correct market price and over a period of time must be fairly accurate.

T. N. Davey,
Atlantic Oil Producing Co.

Arthur Knapp of the United Gas Improvements Co., writes us a letter just after returning to Philadelphia from a three weeks' trip in the Mid-Continent. He indulges in various reflections as follows:

I gave west Texas the once-over. There certainly is plenty of oil out there. You could put the whole state of Oklahoma into west Texas and still have a lot left over and there seems to be no reason why there should not be as much oil in west west Texas as in Oklahoma. The oil business ought to take a trip out there and then quit kidding itself and the public into believing that oil is going to get scarce in the next few years.

The trouble with a lot of fuel oil users is that they have been told so often that fuel oil would soon be a thing of the past that when it gets a little high they jump to coal. The oil business has got to get out and sell fuel oil to get rid of some of the excess petroleum stocks.

* * *

William A. Stoll, secretary and treasurer of the Stoll Oil Refining Co., Louisville, Ky., writes in to say that the victim of a recent airplane accident in New York was not related to his family. He writes:

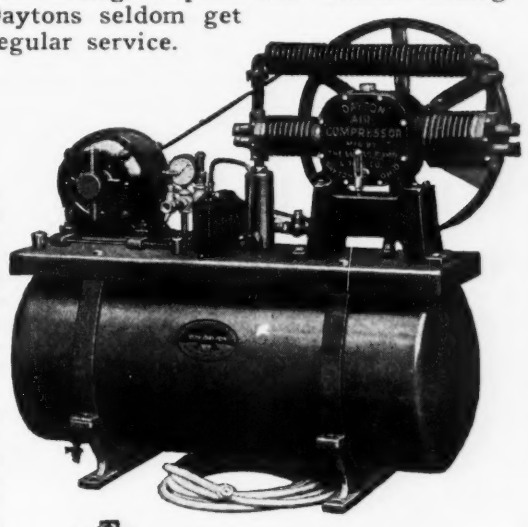
The C. C. Stoll, Jr., of Louisville, Ky., who was killed in an airplane accident in New York City recently was not a son of C. C. Stoll, president of the Stoll Oil Refining Co. of Louisville.

The officers of the Stoll Oil Refining Co. have received many messages relative to the accident and are pleased to state that the misfortune did not befall them. The Mr. Stoll killed was traffic manager of the Peerless Manufacturing Co. of Louisville. He was not related to the Stolls of the Stoll Oil Refining Co.

For Never-Failing Air Service

You Should Buy "Daytons"—Fewest Parts

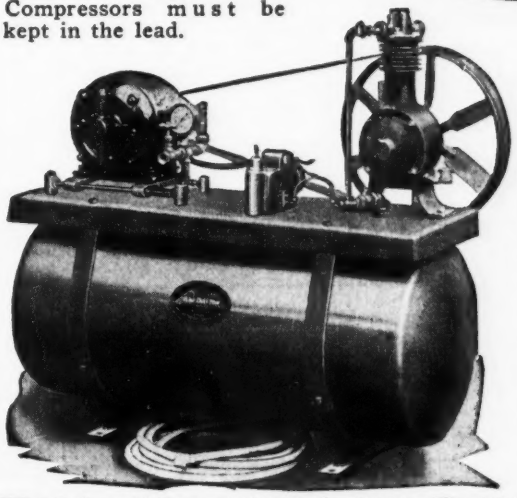
Some of the published descriptions of Air Compressors would lead you to believe that new parts were being added weekly. In the "Dayton" Air Compressor our whole effort has been along the line of eliminating surplus and trouble-making parts. That's why Daytons seldom get out of order—give regular service.



Dayton—
Style G

This is the only Two-Stage Compressor in the world which is built without a connecting rod or crosshead pin. No bolts or cotter pins to come loose. Nothing to get out of order. Oil it occasionally and forget about it. Runs for a lifetime.

A self-aligning bearing in this type (patent applied for) is something new in compressor construction. Dayton Air Compressors must be kept in the lead.



Dayton—
Style E-2

A single stage Air Compressor with ½ H. P. motor, 33 gallon tank, automatic stop and start, phosphor bronze bearings, automatic moisture release and spring tension take-up on belt.

A type and size adapted to the needs of most stations. Sold for a short time at a special price which makes it the greatest compressor value in the world.

The LUCAS PUMP & TOOL COMPANY DAYTON, OHIO.

DAYTON AIR COMPRESSORS

425 Valley Street **Dayton, Ohio**

Help Your Salesmen

to acquire a working technical knowledge of the selection, application and use of lubricants, by ordering for each one a copy of the PRACTICE OF LUBRICATION, by T. C. Thomsen.

It discusses the origin, nature and testing of lubricants and every phase of lubrication engineering.

It is $6 a copy. Make your check payable to—

NATIONAL PETROLEUM NEWS

825 Caxton Building **Cleveland, Ohio**

Fixed Price Policy Centers Responsibility

By Warren C. Platt, Editor

MORE refineries are operating on the plan of a definite price being given the sales department each day and the sales department being required to perform on that price or not make any sales at all. More refineries, therefore, are adopting the policy of refusing to consider counter offers from buyers at less than this fixed sales price.

A general adoption of this policy will work toward a material improvement of the open tank car market, a thing much to be desired on behalf of jobbers as well as refiners. While every sale is necessarily a matter of barter and trade, nevertheless if that trading is left to each member of a refiner's sales organization, the refiner will have as many different prices in a day as he has salesmen and each price will depend upon the ability, or lack of ability, of each individual salesman, with the poorest salesman pulling all the others down.

Practically every other manufacturer and business interest in the country that doesn't operate on a board of trade gives its sales department a fixed price on which it has to perform. With a fixed price which the salesman knows he can't get changed, the salesman then goes out and sells the quality of the product, the fair dealing of his company, the promptness of its service and all the other features of that company. If a lower price is demanded by the buyer the salesman knows he simply has to buckle down and sell all the harder because he can't give the buyer a lower price.

However, the way the oil industry has been operating for years in its tank car market, not only the sales manager but many times the individual salesman has had the authority to change the price at will. Where the individual salesman has not had that authority he generally knew he had but to report an offer to his general office and the lower price would be granted.

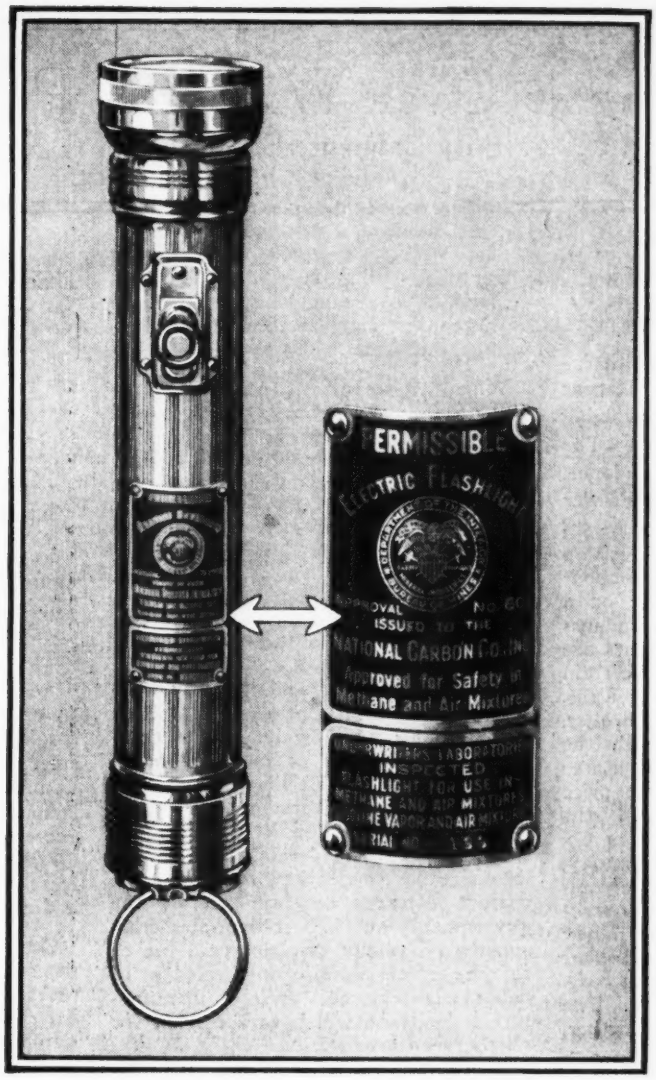
Every salesman is interested in getting the order. Price and other concessions are naturally incidental to him. He has been sent out to get orders first. Orders are the only evidence of his having done a day's job. Consequently, if he is allowed to concede a lower price and he thinks it is necessary to do so to get the order, he will do that.

This situation in the oil business is not the salesman's fault, nor that of the sales manager. It is the fault of the general executives who permitted the policy; who had but to look at most any other line of business to see that it was a poor policy not being followed by anyone hardly outside of the oil business. It was not even being followed by the oil jobber himself in his own sales to the public.

When the general executive of a refinery, or an operating committee, fixes the price for the sales department that general executive will naturally ask himself first, if the price has profit in it. If it hasn't he is going to bring increasing pressure on his sales department, or on his costs, or both, to get a price that will be profitable. The general executive is just as much interested in orders as the salesman but he knows that his day of reckoning with his board of directors is always near at hand, when he must show a profit. With the responsibility for fixing the sales price directly upon him he is going to redouble his effort to see that that price is profitable. He won't be able to pass the buck to the sales department.

Such a price fixing policy also has this great advantage, it keeps constantly before the executive, who also has charge of how much product the refinery shall make, the proposition of keeping his refinery output at a rate at which it can be sold at a profitable price. Too much output will ruin any price. There are times when a higher operating cost, due to smaller output, may be more than offset by the higher price to be obtained by not flooding the market with goods.

CATCHING A FREE RIDE



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Talking it Over With the Producer

By Lawrence E. Smith
N. P. N. Staff Writer

National Petroleum News

Wins Commission, Though No Sale

OIL producers will watch with interest the outcome of a Kansas case in the court of appeals, involving the brokerage of oil properties. The suit of John E. Wells, Independence, Kans., against Davis, Hazlett, Frazier and Bradford, of Wichita and El Dorado, resulted recently in a jury decision in favor of Wells, giving him about $94,000, commission and interest on a deal he negotiated and the defendants failed to complete. The defendants are the owners and operators of certain properties in Greenwood county, Kans. Wells, who is an experienced broker, had a verbal understanding with the four owners that he would get a five per cent commission on the sale price of $1,750,000, provided he sold the property to the Prairie Oil & Gas Co. The Prairie, according to the testimony, agreed to buy at that price but the completion of a new well of large production impelled the owners to withdraw their offer. Thereupon, the broker brought suit for the amount of the commission he would have been paid. The jury saw it his way and went further, adding on the interest.

* * *

A Mistaken Point of View

SOME people apparently believe that the large crude oil buying companies look with favor upon the present depressed market because it gives them an opportunity to store cheap oil to sell later at a higher price.

Such a course would be merely gambling on the future and the experiences of the past several years have shown clearly that storing oil as a speculative proposition is an undesirable course. There is more than an even chance that much of the crude oil now in storage will be worked off at a loss.

The present storage campaign is dictated by necessity. Something must be done with the oil and a company that posts a price thereby makes it known that it expects to buy. It cannot trim its buying policy to the needs of the moment, except as to price. It must continue to purchase and to tank the surplus when there is one.

To go into a big storage campaign now merely as a speculative business would necessitate something more than a guess on the future, if the company doing the storing is run on business principles. It would demand a reasonably good estimate as to when the upswing would start.

When a company with much less production than its refinery requires and no outlook for increasing its production builds up a reserve supply of oil against the greater needs of later in the year, that is business and not gambling.

* * *

Study Helium Production

A GROUP of oil and gas producers in the Mid-Continent has been looking for quite a while on the commercial possibilities of helium production, and it is probable that this summer will see the start of erection of a plant, location not yet definitely fixed. It will require a considerable time to get into sizeable production, but, with the present construction program of the government on lighter-than-air craft and the probability of commercial use of this type of airship once plenty of helium is assured, private manufacturers doubtless will have a market for all they can produce.

It will be an important thing to witness the entrance of private capital into this field. The government has pioneered at the Fort Worth plant, but is there a real reason why the government should attempt to usurp the production of helium any more than it should produce oil and refine it for naval needs. The theory that the government requires protection against war-time needs in the production of any commodity was exploded long ago. Established manufacturers always can do the job more cheaply and more quickly.

* * *

Farmer May Have To Pay The Tax

AN idea has been contributed by an Oklahoma producer to the campaign against the 2 per cent several tax constitutional amendment now before the people of Oklahoma. Commercial oil and gas leases are written on the basis of one-eighth royalty. The producer, if the increased tax becomes law, cannot afford to absorb it himself. A reduction in royalty would be one method of passing on the tax—on new leases, of course. The farmer might well be advised of such possibility, also of the fact that he will pay the increased tax himself on his royalty oil and gas.

Effect Is Felt Of New Methods

JUST as the oil industry has learned to set up a new basis of calculating the performance of the refining division—the vastly greater yields of gasoline obtained through new methods—So it will have to start now to re-appraise what the producing industry can do.

Note, for example, the February figures of the U. S. Bureau of Mines. There was an indicated excess of production over deliveries to refiners and other customers—which is the only figure that can be set up for consumption—amounting to 173,000 barrels, speaking of domestic crude oil without reference to imports. In the Mid-Continent area, which in this report includes Louisiana and Arkansas, the excess of production over deliveries was 197,000 barrels daily, but withdrawals from storage in other districts brought it down to the smaller figure.

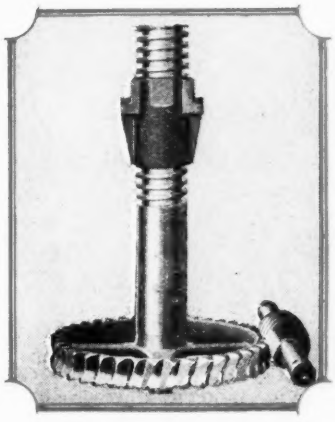
Compilation made by National Petroleum News about the middle of February showed that about 150,000 barrels daily of the Seminole district production was produced by air-gas lift. The total amount, therefore, of domestic over-production at that time was chiefly due to this new technic. That some of this oil—possibly a fourth—would have been produced by some other method does not destroy the argument that a re-estimate of what the producing division can do is now in order. Had it not been for this method of rushing production—had Seminole produced through the usual course of natural flow, pumping and swabbing—the figures would undoubtedly have been far different; probably the market would not have reached the present low level.

Much has been said about the advances made by the oil company technologists. As much can now be said about the promptness with which the executives now utilize the new data that is brought to them. They quickly see the commercial possibilities of what their technical staffs develop, be it in geology, petroleum engineering or mechanical engineering.

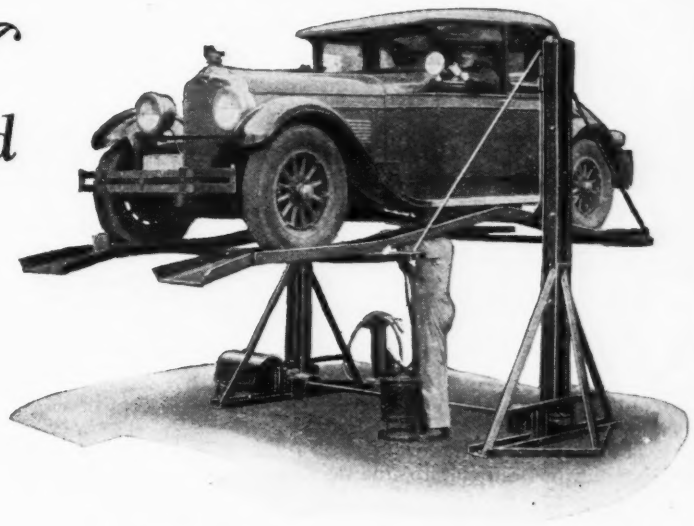
Few would urge the abandonment of air gas lift because it has contributed so largely to present over-production. It is a factor that must be considered, however, in future calculations on what the producing division can do, not only as to rapidity of oil extraction but probably as to total recovery from fields adapted to its use.

NEW

but Centuries Old



Bronze worm gears operating in grease, drive the steel lifting screws. Tests indicate that this simple mechanism will show little if any wear even after 10 years of service.



For more than 200 years the jack screw has been the only *safe* lifting method known. The Gladish Electric Auto Elevator employs a simple, direct application of the jack screw principle, electrically driven. Any automobile or truck weighing not more than 5500 pounds is lifted five feet in two minutes! This performance is guaranteed!

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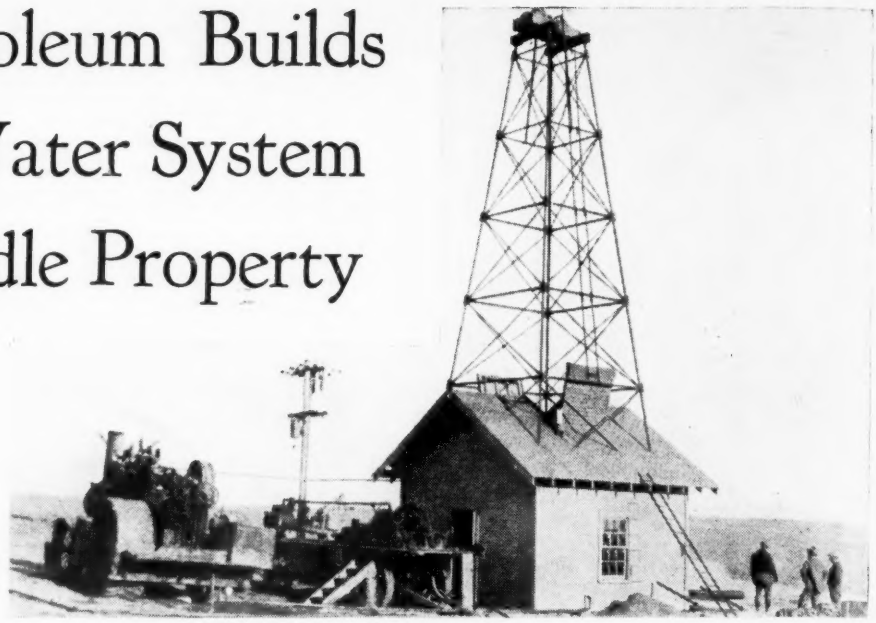
* The President of the American Hoist Corporation is Mr. Walter L. Marr, known to the automotive world for 20 years as the Chief Designing Engineer of the Buick Motor Co. Mr. Marr is personally directing the manufacture of the Gladish Elevator.

Phillips Petroleum Builds Elaborate Water System For Panhandle Property

By A. F. Hinton
N. P. N. Staff Writer



Typical housing and derrick on electrically pumped water wells of Phillips Petroleum Co. in the Texas Panhandle

TULSA, April 29

ONE of several factors that have contributed to high operating costs in the Texas Panhandle, is the poor quality of water of the region. Water is not difficult to find, as it can be produced almost anywhere by drilling 300 or 400 feet, but as a general thing, it is so "hard" and so impregnated with salts and solids as to be highly unsuitable for steaming purposes. Its use has resulted in high mortality of boilers, as well as on other equipment for handling water or in which water is used. The problem has been complicated because the water was too bad to be treated with ordinary water softeners. Some companies that manufacture water softeners, would not attempt to treat Panhandle water.

Companies that were operating extensively in the Panhandle, naturally sought good water, and they competed for possession of water rights along streams or in places where water could be impounded.

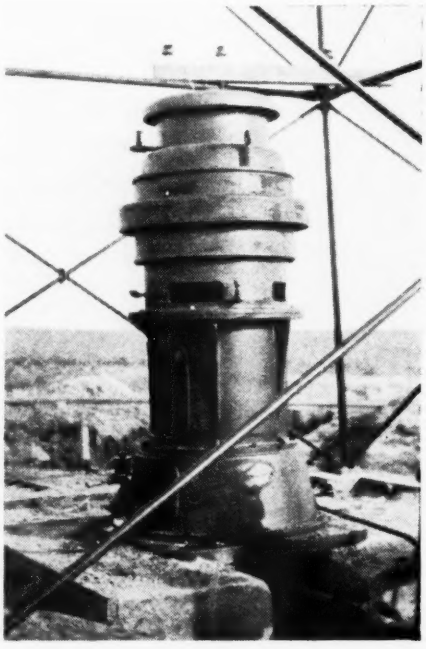
Phillips Petroleum Co. was one of those that began to look for a supply of pure water.

As a result of its search, the company is now assured of a plentiful supply of pure water for stationary boilers and locomotives without softening or treating. In solids, this water tests about 390 parts per million, as compared with a maximum of 2560 parts in water from drilled and sunk wells in the Panhandle. An average of three drilled wells at the Phillips Panhandle camp showed the water to contain 1385 parts per million.

The Phillips water supply is obtained from three wells, and two more are to be drilled in the near future. The three wells are now pumping about 22,000 barrels of water daily each. It is estimated by Phillips engineers that that company will use 30,000 barrels of water daily for the next five years. In addition to its own needs, the company is selling water to the Panhandle & Santa Fe Railway Co., the electric power plant, two refineries at Borger, the city of Borger, and several producers.

THE water supply was discovered by drilling test wells in the vicinity of section 55, block 5, I. & G. N. R. R. lands, Carson county. These wells went down to a water sand at 410 to 420 feet. After favorable locations had been found, permanent water-supply wells were drilled. These wells are equipped with Layne-Bowler water well pumping equipment, drilled by contract on a turnkey basis.

The wells are drilled with 33-inch casing to top of water sand. A string of 18- or 20-inch casing with strainer is set to bottom and inside this, at bottom of well, is the water pump. This discharges through an 8-inch line inside the 18- or 20-inch casing. Inside the 8-inch, in turn, is the drive shaft which operates the pump from electric motor at surface. The water pump is described as the type 15, CLC, 14 stage, 15-inch bowl, with cast iron impellers and 8-inch discharge. The drive shaft is 1⅛ inches in diameter. Pump is lubricated through a string of 3-inch tubing. The pump operates at 1170 r.p.m., giving discharge capacity of 700 gallons a minute, with head of 300 feet. The head weighs 28,800 pounds.



Surface equipment for motor-driven water well, Layne-Bowler method, as used by Phillips Petroleum Co. in Texas Panhandle

Pumps are operated by a 100-h.p. vertical type, 2300 volts, 60-cycle, 3-phase motor, operating at 1200 r.p.m. This motor is housed in a steel and corrugated iron building surmounted by small derrick for use in working on well. The well motors operate individually, and must be started and stopped separately, having no automatic control.

THE water wells are connected by a 16-inch discharge line to a 10,000-barrel water tank in section 55, whence the water is drawn into the pump station and pumped to the field. This station, known as the Plains water station, is completely electrically equipped and operated, with automatic controls. Its equipment consists of three Gould 5-inch 5-stage centrifugal pumps, which deliver 600 gallons a minute at 312 pounds pressure, direct connected to 200-h.p. G. E. motors, 2300-volt, 60-cycle, 3-phase. Space has been provided and connections made for a fourth pump.

The pump station is arranged so that the pumps are hooked up in series, and one pump can pump into another instead of directly into the line. Thus a pressure of 624 pounds is available when emergencies, such as fire fighting, makes it necessary. There is an individual 8-inch intake line to each pump from the 10,000-barrel water tank; each line is equipped with strainer. The tank is equipped with gauge board, and is painted inside with waterproof cement paint.

The pumps discharge through a 12¾-inch line to the field. It is about 14 miles from the water station to the main Phillips camp, where the new water system connects with the one al-

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ready in use. The 12¾-inch discharge line is of pipe weighing 37.5 pounds a foot, plain end, with Dayton sleeve couplings. It is covered with a special paint made by Dupont for this job, and applied with brush. The line is buried so that top of pipe is 24 inches below ground surface.

The water pump station is 350 feet higher topographically than the field, this head of water in the line giving a pressure of about 150 pounds, sufficient practically to offset line friction. It is possible to deliver about 30,000 barrels a day from the tank through the line by gravity. The pumps are hooked up with automatic compensators, which regulate operation of the pumps according to line pressure. If pressure falls below 300 pounds, the motor driving first pump is automatically started. If pressure gets down to 290 pounds two pumps start, and at 275 pounds all three pumps start. This control is so arranged that if all pumps are off and a sudden fall in pressure occurs, they do not all start up at once, throwing full load on motors at one time, but come on one after another. After pumps have started on account of low pressure, they automatically shut off as pressure is built up, No. 3 pump stopping at 275 pounds, No. 2 at 290 pounds, and when pressure gets to 300 pounds or more, all three pumps are idle.

THE pump station building is of steel frame construction with corrugated iron roof and siding, and is 60 by 36 feet. All connections to pumps and lines are flanged, designed for 250 pounds pressure, which is estimated as the working pressure of the plant. Amount of water discharged from station is recorded by a 12-inch, 250-pound Venturi meter tube, with recording apparatus. When pumps are operated in series when high pressure is desired for fire-fighting or other purposes, the automatic cutoff does not operate. A 4-inch relief valve is provided to operate if pressure gets up to 500 pounds.

The new 12-inch discharge line ties into the old water system at the northeast corner of section 21, block Y, making connection with main 10-inch discharge line from section 5, block Y, west through main camp and on to the Johnson gasoline plant. This line, which is supplied from four wells, will deliver 60,000 barrels of water daily. It has been heretofore the company's principal water distributing line, although the water from these wells is hard and high in solids. From this main line, smaller discharge lines radiate to the various properties.

On the north side of the Canadian river, the company will soon have in operation a water plant on Big Creek, in section 1, block J. I. & G. N. R. R. survey. Sunken wells at this point will deliver water through an 8-inch discharge line to the company's Canadian plant in section 1, block X-O2, and thence south across the river to connect with the present system.

Buying Electric Power is Expensive, Consider Producing Your Own

By J. B. Northrop
Ohio Valley Refining Co.

Read at N. P. A. Meeting, Cambridge Springs, Pa., April 28-29

THIS is rather a deep subject for one not versed in the technicalities of either the production of steam or the generation of electrical energy. It is therefore to be expected that there will be many adverse opinions to the assertions contained in this paper.

I do not mean to infer that existing plants can be immediately equipped or remodeled without the expenditure of considerable sums to take advantage of the saving that the most reputable manufacturers and engineers advise us can be made. Most of us would have to completely reconstruct our boiler houses, installing high pressure units capable of withstanding 170 to 200 pounds of steam pressure, before any attempt could be made to generate economically our own electrical power.

The average small refinery of 1000 to 1500 barrels per day throughput will utilize as prime movers, pumping oil and water, operating refrigerating equipment, filter house and centrifuge department, including lights, manufacturing completely all products into finished oils, from 200 to 250 horsepower or approximately 2500 kilowatt hours of electric energy per day which, based on the lowest scheduled rate in effect in the Pennsylvania district that I know of, will cost 1½ cents per kilowatt hour or approximately $40 a day. Rates differ considerably in various sections, the above rate being obtainable only on a continuous load factor and demand charge of 2500 to 3000 kilowatt hours per day, any increase in the power load lowering the rate until it would be possible in the larger plants to obtain a rate on the entire requirements of approximately 1 cent per kilowatt hour. Naturally this will place them in an advantageous position as compared with the smaller plants.

IN defense of the title of this paper, I have been repeatedly told that the average refinery in the Pennsylvania district does not operate its boiler house at an average efficiency of quite 60 per cent, most of the equipment being poorly set and of such a type that better results are almost impossible of attainment.

To place himself in a position to manufacture his own electrical energy the refiner would first have to install new boilers of sufficient capacity to take care of his entire requirements, let us say approximately 800 boiler horsepower per 1000 to 1500 barrels of crude throughput per day. These boilers could be purchased from any one of several different manufacturers, guaranteed to operate continuously at 150 per cent of rating and 72 per cent efficiency, providing they are equipped with approved stokers and forced drafts, consuming their fuel practically smokeless.

From quotations furnished by manufacturers, including superheaters installed in the boilers to add 100° to the steam temperature, soot blowers, feed water regulators, valves, piping and insulation, two boilers could be completely installed and placed in operation at a cost of approximately $35,000. Should your boilers be in the 60 per cent efficiency class, the installation due to its greater efficiency should net a saving of $10,000.00 to $12,000.00 a year this saving varying somewhat in the different localities depending on the price of coal delivered to the plant.

THE superheater as installed will cost very little, if anything, to operate, rather utilizing the greater portion of the waste gases after they have done their work in generating steam.

You will now be in a position to install sufficient electrical equipment to take care of your power requirements.

There are two methods by which this can be accomplished, the first of which is in common practice, especially in the larger plants. This consists of passing steam through turbines at a high head pressure, ordinarily with no superheat, and with a back pressure of not to exceed 20 pounds collecting other exhaust steam from prime movers, steam pumps and such other equipment throughout the plant as may be in operation, to which is added sufficient live steam through regulating valves to maintain at all times the desired pressure in the exhaust line.

This waste steam, after trapping out the condensation, is returned to superheaters which are usually installed so as to utilize the heat units contained in the waste gases from the stills. The superheated low pressure steam is in turn re-piped to various parts of the plant to be used in process work, such as operating stills, heating tanks and in the refrigerating department.

By the adoption of this system a great many parts of the plant, in order to make full use of the heat units in the exhaust steam, would have to be equipped with high pressure steam lines for the operation of prime movers with superheated exhaust steam low pressure lines for process work discharging where possible to a still lower exhaust steam line to return the condensation to the boiler feed water heaters.

ANOTHER method which has not as yet become common practice but which in my opinion is destined to become very popular in the near future and in all probability would work out to better advantage in small plants, especially in slack periods when not a sufficient amount of exhaust steam could be utilized to develop the full power load required, would consist of practically the same boiler equipment but would have superheaters installed to increase the steam temperature approximately 100°.

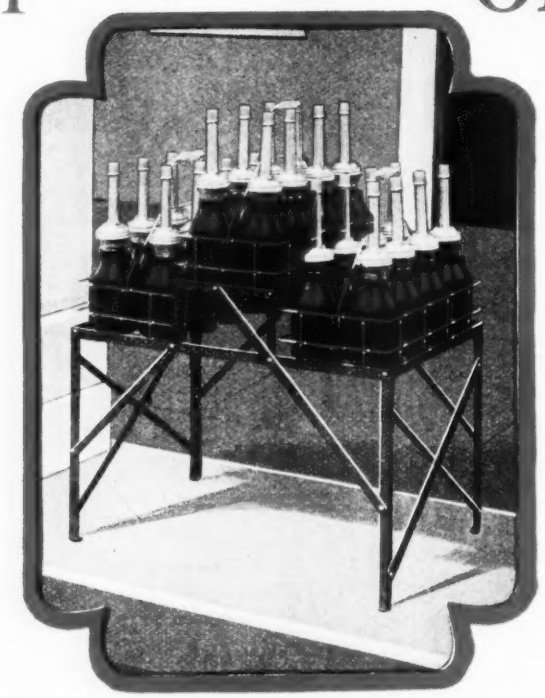
The steam would be used at 200 pounds boiler pressure, passing through steam turbines direct connected to generators with a back pressure of 65 to 70 pounds. The steam turbine would be used simply as a reducing valve, allowing it to float in the line, by-passing through reducing valves any portion of steam generated not required to produce electrical energy, using this steam at 60 to 70 pounds pressure to operate various parts of the plant—steam pumps, process work, stills—returning any exhaust to the boiler feed water heater under 5 to 10 pounds back pressure, if desired.

As an illustration let us trace this steam through one department which lends itself very readily to the utilization of practically all of the heat units.

The steam is generated in the boilers at 200 pressure, passing through the steam turbine with its 100° of superheat and 65 pounds back pressure with a heat loss of approximately 6 per cent, or with 94 per cent of its original B. T. U.'s still contained in the steam. The steam then passes to the refrigerating department, the 65 pounds pressure operating steam driven ammonia pumps as well as brine pumps, they in turn exhausting at 20 pounds back pressure through the generators returning the condensation from the refrigerating equipment to the boiler feed water heater.

IT would also be possible by this method to install steam pumps and prime movers of sufficient capacity to operate the plant, using the exhaust steam from the turbines at 65 pounds back pressure, in turn using the exhaust steam from the prime mover at 20 pounds pressure as in the first method, trapping out the condensation, reheating with the waste flue gases and utilizing the heat units contained in

OUT IN THE OPEN



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"Friction, Lubrication, Fats and Oils", by Emil P. Dieterichs, is an inexpensive little book that contains valuable information on the manufacture of lubricating oils, solid lubricants and greases, together with numerous formulas; modes of testing oils and the application of lubricants.

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National Petroleum News
802 Caxton Bldg., Cleveland, Ohio

the exhaust steam and the waste gases from the stills to a point at which the greater proportion of the electrical energy would be a by-product which could be sold to further decrease the manufacturing cost.

I am not sufficiently versed in the technicalities of engineering to advise what saving could be made by such an installation but there should be a saving on the boilers of $10,000 to $12,000 a year in increased efficiency, and somewhere close to $10,000 a year on generating your own electrical energy if the exhaust from the steam turbines were used only for process work without attempting to make a by-product of the electrical energy.

Such equipment, capable of developing 375 kilowatts, approximately 300 horsepower, together with its switchboard, could be installed for about $11,500. Turbines operating at 65 pounds back pressure would consume approximately 68 pounds of steam per kilowatt, or would utilize approximately 500 boiler horsepower to develop 300 horsepower at the motors. Two units, one for use and one for stand-by, would cost $23,000 or a total investment for boilers and electrical equipment of $60,000 which should enable one to manufacture electrical energy at from ¼ to ⅜ cents per kilowatt hour as against the 1½ cents charged by the public utilities companies. Summed up, you would have an approximate investment of $60,000 an investment which should carry interest and depreciation charges and retire itself on the saving which could be made in three and one-half to four years time.

SOME time ago I read in one of our power magazines of a large paper plant recently put in operation, which is just such a plant as I have in mind, claiming returns of 63 per cent on the entire investment for electrical energy developed in this manner, or paying for the turbine and generator in increased efficiency every year and a half. This efficiency is based on generating their own power with condensing steam turbines.

I am also reliably informed that the Standard Oil Co.'s plant at Bayway, N. J., either has in operation or will shortly place in operation steam turbines operating at a high back pressure. Many other lines of industry are also utilizing the back pressure in process work. If I am correctly informed the first plant of any great size to adopt it was the Goodyear Tire & Rubber Co., Akron, O.

Please do not misinterpret my statements as meaning that I am opposed to purchasing central station power if rates are fair, providing you are not in a position to generate steam economically and at high pressures. For such a plant I believe it to be more economical, taking into consideration its convenience, adaptability and low upkeep cost, than would be the operation of steam driven engines and pumps exhausting a good proportion of their energy to the air.

Quincy's New Terminal Reduces Long Hauls

BOSTON, April 29.—Quincy Oil Co., Quincy, Mass., of which Fred E. Bergfors is general manager, secretary and treasurer, is using a new tide water terminal at Chelsea, near the terminals of the Standard Oil Co. of New York, Mexican Petroleum Co. and other large distributors. The old rail bulk plant at Quincy Adams is still being used as a distributing center for the southern suburbs of Boston, but, instead of bringing in gasoline by rail as was done in the past, trucks are being used to transport it the 12 miles from the new to the old station.

The plant has tankage for 1,000,000 gallons of gasoline and wharfage to handle a 350-foot boat. There is 25 feet of water at ebb tide. About 1000 piles, each 1½ feet in diameter and 30 feet long, were driven into the ground to afford a foundation for the gasoline tanks. Sand one foot thick was laid over the piling as a cushion for the tanks. Under the Massachusetts building regulations, a state inspector watched every rivet placed in the gasoline storage tanks. This added to the expense of building a considerable item. Four-inch pumps at the station are electrically driven.

The plant saves the company a great deal of carting in the main part of Boston as it is only two miles from the Massachusetts statehouse on Beacon hill.

PARSONS, KANS.—Completion of the new stations it is now erecting will give the Dieterich Oil Co. here four stations, one bulk and three service stations. The company also is operating pumps at garages and at several stores here and in neighboring towns. White Eagle gasoline is being handled, and tires.

White Eagle road signs are being erected in the country around Parsons. Advertising is being carried on to herald the opening day features at its new station.

LOS ANGELES, CALIF., April 29.—A. A. (Arch) MacDonald, West Coast manager for Hughes Tool Co., took a vacation a little ahead of time this year, staying at home for about three weeks with a case of "Flu." But Mrs. MacDonald brought him around and he is now back at his desk, a little pale, but still smiling.

SIOUX FALLS, S. D.—Brown & Heiss Oil Co. has just installed a 15 gallon pump to its station; also an umbrella pump canopy, a 15-foot cement drain pit, and a wash rack with steam cleaning system. The company now has three pumps at its station here and three drain pits.

YATES CENTER, KAN.—The next meeting of the station managers of the Peerless Oil & Refining Co., Chanute, Kan., will be held at Garnett. The last one was held at Chanute on April 14.

Stations EASIEST to Spot

secure tourists' business

THE lion's share of tourist business goes to those stations whose locations are made to stand out as beacons on a hill.

That prominence can be gained for a filling station with a *projecting* Flexlume display—electrically brilliant by night and attractively bold by day. Motorists, approaching from down the road, are bound to notice and read Flexlume advertising *in time* to stop and buy. That means extra sales by hundreds—perhaps by thousands.

Secure information and free color sketch of a Flexlume display for you. Write the FLEXLUME CORPORATION, 1122 Military Road, Buffalo, N. Y.; or phone the Flexlume office, any principal city.

Factories also at Detroit Los Angeles, FLEXLUME CORPORATION *Oakland, Cal. and Toronto, Can.*

FLEXLUME ELECTRIC DISPLAYS

Distinctive Curb Standards

National Curb Standards are used by the leading oil companies because of their quality and artistic appearance.

Specializing in this line has placed us in the position of experts. We build superior Curb Standards of pipe or shapes in large or small quantities with or without advertising signs.

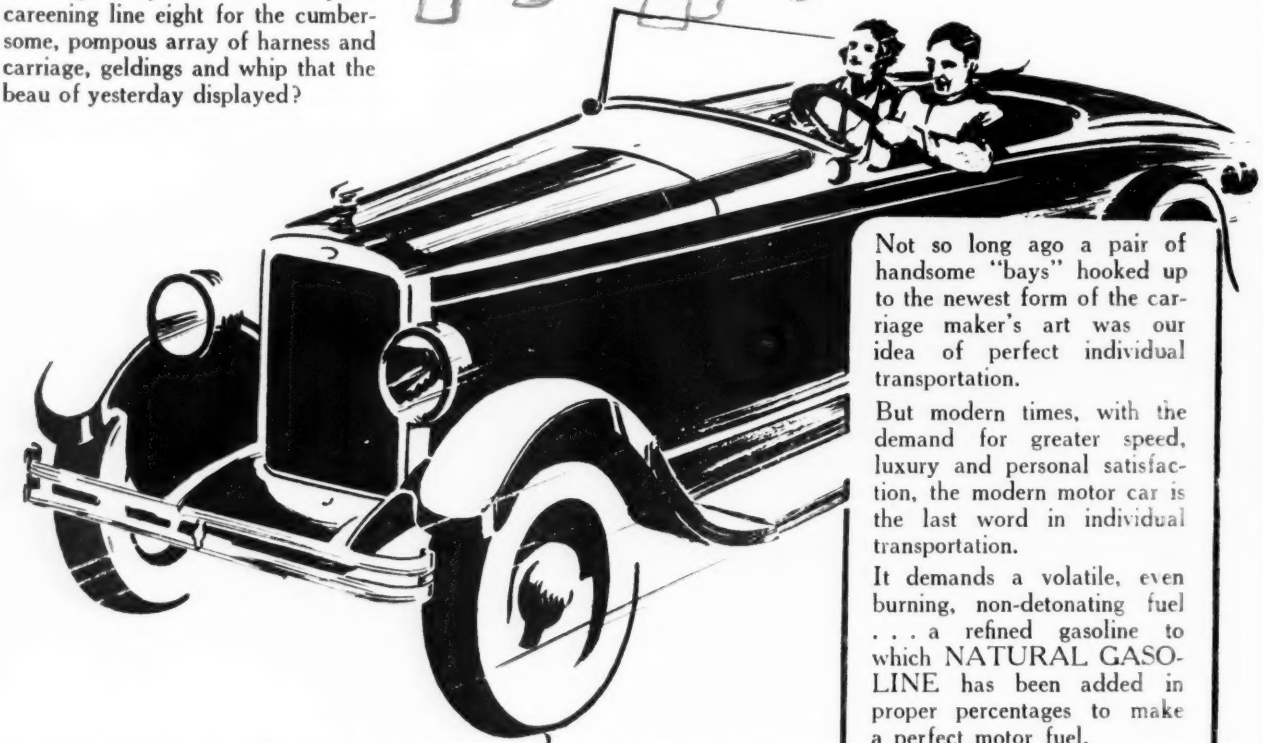
We also manufacture to specifications any type of piping or frame support for overhanging signs.

Write today, stating your requirements and ask for our attractive prices and descriptive literature.

NATIONAL PIPE PRODUCTS CORP.
Main Office and Factory
ROCHESTER, PA.

TRANSMIGRATION of TRANSPORTATION

What gilded youth would swap his careening line eight for the cumbersome, pompous array of harness and carriage, geldings and whip that the beau of yesterday displayed?



Not so long ago a pair of handsome "bays" hooked up to the newest form of the carriage maker's art was our idea of perfect individual transportation.

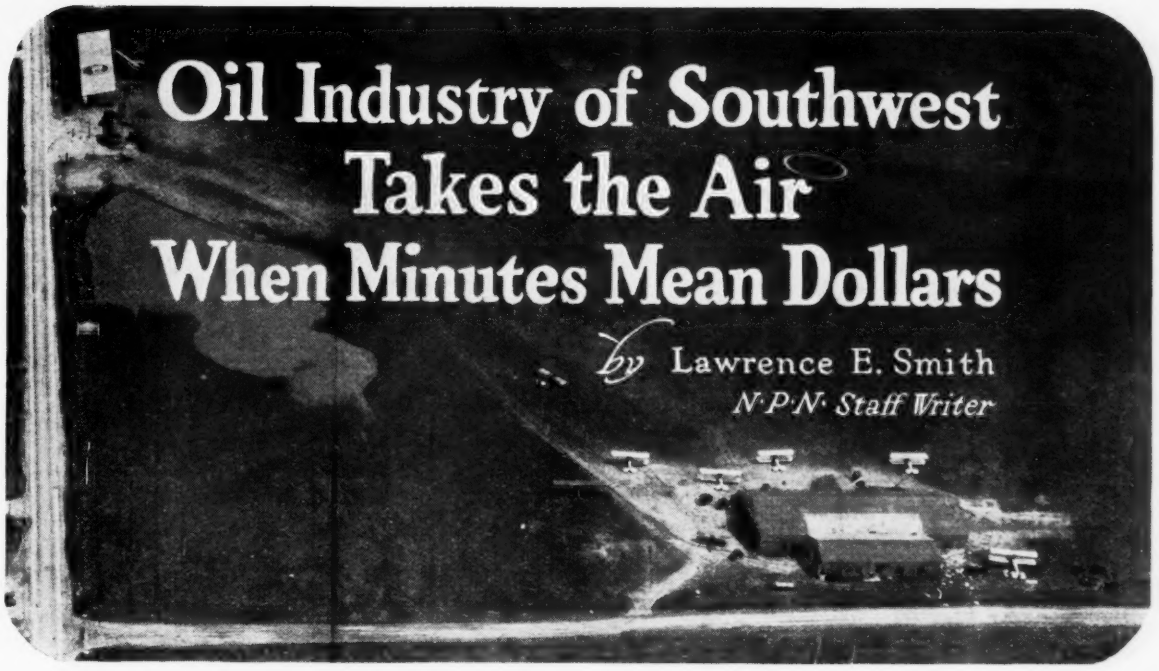
But modern times, with the demand for greater speed, luxury and personal satisfaction, the modern motor car is the last word in individual transportation.

It demands a volatile, even burning, non-detonating fuel . . . a refined gasoline to which NATURAL GASOLINE has been added in proper percentages to make a perfect motor fuel.

CHESTNUT & SMITH
CORPORATION

Tulsa, Oklahoma

A DEPENDABLE SOURCE OF YOUR SUPPLY OF NATURAL GASOLINE



Oil Industry of Southwest Takes the Air When Minutes Mean Dollars

by Lawrence E. Smith
N·P·N· Staff Writer

An airplane photo of McIntyre airport at Tulsa. Fueling station is in upper left hand corner

THE extent of airplane utilization in the Mid-Continent is little known outside those persons immediately interested. Yet there is, says D. A. McIntyre, veteran in air service, although not in years, more commercial flying from the airport in Tulsa which he owns than from any other in the United States.

There are reasons why this should be so. The oil business is one where quick decisions and correspondingly quick action is demanded.

Each company has a vast number of things each day that must be settled by someone in authority and in person. For trips of 100 miles or more, therefore, or even less when roads are bad, the airplane is popular.

The kinds of business that are transacted at the other end of an airplane trip out of Tulsa are widely varied. Many of the flights are for land department purposes. Sometimes executives take the air to catch trains they have missed when setting out for far away cities. Sometimes equipment parts are carried to the field where there has been a breakdown and consequent suspension of activity until the parts arrive. One "shooter" makes regular trips with a load of gelatin to wells that are to be shot. And about the middle of April, the airplane enabled oil companies to meet the payroll in an oil town.

THE town was Cromwell. Because of torrential rains, automobile transportation had been stopped to the town for several days and there is no railroad. Hence, the bank had been getting in no new currency. Friday was at hand and the next day the pay checks would come rolling in. And people are likely to be suspicious when the bank can't pay.

The bank president appealed to a Tulsa banker for help. The Tulsa banker knew exactly what to do. Soon there was a supply of legal tender on its way to the Cromwell bank.

Another item that operates in favor of aviation in the Mid-Continent is the distance between oil centers, and the uncertain train connections to many of the towns where development or prospective development is under way.

Leaving out most of the favorable factors, however, that have operated to put this territory ahead of other sections of the country in commercial flying, purely on a hard cost basis, it is as cheap as automobile operation.

SHORTLY after the war, D. A. McIntyre, an army pilot, came to Tulsa as an employe of the Curtiss Southwest Airplane Co. Much of the income from flying at this company's field came from the people who wanted to say they had been in the air. Later, McIntyre took over the business, leased 127 acres northeast of Tulsa, and started to put into effect some of the ideas he had harbored for quite a while. He now operates the largest privately owned field in the United States.

He prefers to call his business an airplane service station and to liken it to that of the man who runs a big public garage for automobiles. He has large hangars, a good landing field, carries a full line of parts for several types of motor, supplies gasoline and oil and has machine shops and mechanics to do any kind of repair work that turns up. He keeps three or four experienced pilots on his staff all the time, ready to take care of the "livery" business that comes along, and there is a big volume of it, for many of the oil men who do not own ships employ them frequently. In addition, McIntyre has the Oklahoma sales rights for an airplane that has become quite popular in the territory. And on top of all this, he teaches flying. Usually he has four or five students going through the mill at the same time.

"Everything you see around here," remarked McIntyre, "has been made out of the air. The field pays its way and makes a profit. That is because it is a business proposition and not a jazz performance."

THERE are, when all of them are on the home field, 22 planes at the McIntyre airport. Five of these are owned by the field, the rest belong to people who use them for business or pleasure or both. The pleasure flying from this field is fairly extensive, but in terms of flying hours is second to the commercial use.

The character of utilization is illustrated by a list of the people who own ships and operate them for business.

The Gas Engineering & Construction Co., western representatives of the Clark Brothers Co., Olean, N. Y., uses a Waco ship made by the Advanced Aircraft Co., Troy, O. They send mechanics to fields where engines and compressors installed by the company require factory service. These installations are scattered all over the fields of the Southwest and speed is the thing desired.

G. M. Piggott, superintendent of the land department, Roxana Petroleum Corp., has consistently used a plane for the past eight months. Mr. Piggott flies his ship part of the time but, where pressed for time, he employs one of the Airport pilots. His ship is a Waco.

Maurice F. Breene, drilling contractor, began about two years ago to fly just for fun. Quickly he saw the advantage of getting speedily to fields where he had contracts. He flies his own ship, a Waco, makes many trips between Tulsa and central Texas, where he operates several strings of tools.

Vern Brown, another drilling contractor, owns a Travelair ship, made in

Wichita, Kans. He is his own pilot. Mr. Brown has been drilling in the Seminole field and makes the trip in about 50 minutes. With roads in good condition and with good luck, one can drive it in four or five hours.

A third drilling contractor, Hugh N. West, owns a Travelair and flies it himself.

John Bach, owner of the Marmon automobile agency, Tulsa, flies his ship, a Waco.

Ed Rollestone, of Bristow, is a little outside the Tulsa category, but as he bought his ship here he is counted. He is a recent convert to flying as a means of expediting business. His ship, a Waco, powered with a Hispano-Suiza motor, takes him on many a trip in the interests of the Roland Oil Co.

Willis C. Brown, district manager for the Foxboro Meter Co., is rather a veteran at flying in this territory and has seen all of the oil territory of the Southwest from the air. He expects presently to take the air in a ship of his own design.

Alexander Leitch, of the National Finance Corp., who has branch houses in several Oklahoma towns, habitually makes the rounds in his Curtiss JN4D.

To this list, although again outside the Tulsa group, may be added J. H. Hudson, of the Hudson Drilling Co., Ardmore, who for a long time has used the air lanes in getting about to his several strings of tools.

One of the most consistent users of airplanes is Fred L. Foster, of the Foster-Hamilton Co., advertising agents. Another is M. M. Kinley, torpedo man, who transports both himself and his dangerous commodity by air.

Then there is the large number of oil men and others who employ the McIntyre air service on special occasions. The habit grows and there probably will be within the next year a much greater number of privately owned ships at the Airport. The advantage, of course, is in the lowered cost for steady service, in the same way that it is cheaper to own your car than to hire taxis every day.

NOT only is the number of ship owners increasing but the number of business men who are learning to fly. People who remember the long and severe grind that army pilots went through before they were given their wings are prone to think it is all learned in the same laborious way. The difference lies in the fact that the army gave and still gives a course of training that embraced everything, from the mechanics of airplane motors, up through radio operation and machine gunnery to calculation of the enemy position and combat flying. It was the latter phase that called for all that instruction in stunt flying. There is no use for such knowledge in the kind of business flying that is done out of the Airport. All that is required is the ability to take a ship off the field, fly it in as straight a course as possible to the desired point and land it. McIntyre says he turns out many a good flier in 10 hours and one of his star pupils, Robert L. Carruthers, of the Twin State Oil Co., was "soloing" after four hours and 10 minutes flying accompanied by pilot.

Vern Brown, Drilling contractor, about to set out for Seminole

There is also the impression that flying is a game for the very young men. McIntyre says there is no age at which a man should consider himself too old to learn. If he has good eyesight, good hearing, a proper sense of equilibrium and steadiness of nerves, he is as good material as anyone. In fact, he says, the men who have several years of business experience back of them make better flyers than the youths, generally. They are more thoughtful, are more inclined to act on reason and not on impulse and generally have a greater sense of responsibility.

It may have been inferred from the remarks about the businesslike aspects of the flying done from the Airport that stunt flying is "out." Such is the case. Rarely, indeed, do the visitors to the field see anything thrilling. It is a steady and methodical departure and arrival of ships. McIntyre, himself, experienced Army pilot that he is, has just about abandoned stunting. Never does he indulge in it when on a commercial trip, nor do any of his pilots. Their object always is to get the passenger to his destination in the shortest time and in the safest and sanest way.

A big contributing reason to the private ownership of ships for oil country use is the low cost. Right after the War, a good airplane that was serviceable and could be depended upon to function for a long time cost from $5,000 up. These were high-powered planes and expensive to operate. Now a light three-seater, whose operating costs are less than most six cylinder cars, can be bought for around $2,500, or even less.

THE old type ships which were in greatest vogue and were to be had at the $5,000 and up figure were 90 horsepower motored, with a top speed of around 70 miles per hour. They would carry one passenger and pilot and 20 gallons of gasoline—about two hours' supply. They had a slow take-off and a fast landing speed.

Now, at the lower price mentioned, a three-passenger ship can be purchased that has the same horsepower motor as the old one, with a top speed of 100 miles per hour, quick take-off and slow landing speed and fuel capacity of about 40 gallons, or four to four and a half hours' supply.

The old type had a wood fuselage; now, the new production ships are covered, as to fuselage, on structure of all-welded tubular steel. The new type is not only more durable but safer. New production motors are veering to the air-cooled type.

Initial cost is interesting, operation expense is more the influencing factor. Mr. Piggott, of the Roxana, has kept detailed records of his expenses during the eight months that he has owned a ship. Roughly speaking, he has found the direct operation expense to be a little over 5 cents per mile.

In the eight months he has been in the air about 175 hours and has traveled 15,000 miles. It is of interest to note that in all that time he has postponed trips only twice because of bad weather.

His records show that he has averaged $4.78 per flying hour, itemized as follows: Gasoline and oil, $2.67 (9 gallons gasoline, one quart oil); labor, parts and miscellaneous expense, 93 cents; storage, $1.18.

THE gasoline price appears high, but this is a record of total expense and includes some high priced fuel picked up in isolated parts of the country. In the miscellaneous classification is included such items as taxi fares to and from landing fields at towns where stops were made and once or twice there has been a forced landing, necessitating considerable expense to hire a car. His storage charge, Mr. Piggott has figured on the basis of flying hours; the flat cost at the McIntyre Airport is $25 per month.

Nothing has been allowed for depreciation in the foregoing figures, nor for

(*Continued on page* 80)

Premium Motor Oils

"PREMIUM" means *extra* fine—*extra* valuable—*extra* efficient. Canfield has called its **best** motor oils "Premium" because they richly deserve the name.

Guaranteed 100% PURE PENNSYLVANIA OIL

For Canfield Premium Motor Oils have a *premium* base. They are made from the choicest crudes that ever came out of the treasuries of the earth—100% Pure Pennsylvania.

Canfield Premium Motor Oils are given *premium* treatment. They are produced by the Sharples method, now recognized as the last word in modern oil refining.

Canfield Premium Motor Oils are run at our Coraopolis, Pa., plant. There a separate building houses a veritable battery of Sharples Centrifuges, the most improved and efficient equipment of their kind in the industry.

These Sharples separators take the oil, after the lighter products are distilled off. By the Canfield way of running this process, the oils are subjected to less heat than by the older method. The Sharples machines whirl off the paraffine wax.

The result? A pure stream of Canfield *Premium*.

Worthy of lubricating the finest motors and other mechanisms. Able to win and hold the most discriminating business in your community. Known as building and maintaining a solid volume upon the only appeal that stands up in the end: namely, *Quality*.

Below is the list of Canfield Products. Check the items in which you are interested. Tear off and mail today. We'll "come back" with samples and quotations.

Serving Jobbers since 1886.

THE CANFIELD OIL COMPANY, *General Offices:* CLEVELAND, OHIO

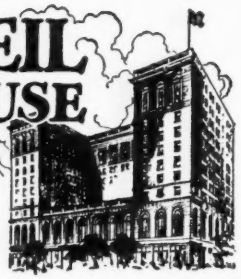
Refineries: Cleveland, Ohio; Coraopolis, Pa. *Compounding and Grease Plant:* Cleveland

Greater New York Plant: 285 Tonnelle Ave., Jersey City

Canfield Oil Co. QUALITY & EXPERIENCE SINCE 1886

- ☐ Premium Motor Oils (100% Pennsylvania)
- ☐ Premium Tractor Oils (100% Pennsylvania)
- ☐ Canfield Filtered Motor Oils
- ☐ Mid-Continent Motor Oils
- ☐ Mid-Continent Tractor Oils
- ☐ Zero Oils
- ☐ Black Oils
- ☐ Car Oils
- ☐ Castor Machinery Oils
- ☐ Belt Dressing
- ☐ Soluble Oils
- ☐ Cutting Oils
- ☐ Viscous Neutrals
- ☐ Non-Viscous Neutrals
- ☐ Red Oils
- ☐ Filtered Cylinder Stocks
- ☐ Steam Refined Cylinder Stocks
- ☐ Petrolatums
- ☐ P. O. C. Gear Compound
- ☐ Zero Gear Compound
- ☐ High Pressure Lubricants
- ☐ Cup Greases
- ☐ Fibre and Sponge Grease
- ☐ Gear Shield
- ☐ Axle Grease
- ☐ Auto Soap
- ☐ Mine Car Greases
- ☐ Graphite Grease
- ☐ Crank Pin Grease

The NEIL HOUSE



The Leading Hotel of

COLUMBUS, OHIO

650 Rooms

(Each with Private Bath)

European Plan

$2.50 a day and up

Opposite the beautiful State Capitol Building. In the heart of the city's interest. The new NEIL HOUSE, erected on the site of the world-famous old Neil House, has become nationally known not only for its deliciously good food and bright cheerful rooms, but because it has added a feature too often overlooked in modern hostelries — HOSPITALITY.

THE NEIL HOUSE

COLUMBUS, OHIO

Frederick W. Bergman, *Managing Director*

The Tret-o-lite Process is RAPID!

Time required only for mixing and settling. Mixing often completed during normal flow of oil from well to tank. Settling takes only the time for normal oil and water to separate.

WM. S. BARNICKEL & CO.

St. Louis, Mo.

M. M. Kinley, Torpedo man, makes this kind of a trip with this kind of cargo, every week

(Continued from page 76)

interest on investment. Mr. Piggott says he would depreciate a ship at the rate of one third its cost a year. Assuming that its cost was $3,000 and the interest on that was 6 per cent, it works out that the cost per mile is around 10 cents. For comparison, agencies in Tulsa which rent cars to the public charge 15 cents per mile for Fords; 18 cents per mile for six-cylinder cars.

THE total expense on this ship for labor and parts in eight months was $160. In the cost figures given, Mr. Piggott has not included the services of pilots employed from time to time. While he is himself a pilot, he finds it to his advantage on many trips to have someone along. There is a certain amount of work necessary after the ship is landed. If there is much wind, the ship will have to be tied down and will have to be fueled and oiled for the return. Time is the important thing on such trips, else they would be made in some other way. Mr. Piggott lands at his destination, takes a taxi to town, transacts his business, taxis back to the ship which is ready to go again. On the same day a little while ago, he was in Topeka, Wichita, Tulsa, Oklahoma City and back to Tulsa again.

When the Ramsey well came in in Cimarron county, Okla., early in the year, he left Tulsa at 2 o'clock in the afternoon and reached Boise City, the town nearest the well, in four hours and five minutes. By train, it takes about 30 hours to go there from Tulsa.

Amarillo is 17 hours by train from Tulsa, but the flying time is from three and a half to four hours. Wichita, Kans., 240 miles by auto road, is reached from Tulsa in about one hour and 20 minutes. Ponca City, 109 miles by highway, is a 45 or 50 minute trip from Tulsa by air.

The oil country of the Southwest is peculiarly adapted to flying, for landing places can be found at most any time. Seminole, for example, has a natural landing field about a half mile south of town. Here, as at many of the other towns of the oil country, the taxi men have come to look for passengers who drop in by air. Little time is used up in waiting for transportation to town. Soon, the old time town 'bus will change its slogan and advertise that it meets all airplanes.

PILOTS of the type of McIntyre who see the flying business as a business and not as a sport, welcome the new regulations that will go into effect July 1, to be administered by the Department of Commerce. Flying appears, under these government rules, to be safeguarded in every particular. They begin with factory inspection of every plane that is turned out. Commercial fields must conform to a high standard and to be regularly inspected. Licenses will be issued to pilots only after tests of competency. Industrial permits must be obtained for privately owned ships.

Such regulation, says McIntyre, will eliminate the unfit flyers and the unserviceable ships, of which there are quite a few in the United States. The public already is becoming informed on the requirements and people who plan business or pleasure trips by air are beginning to ask to see the pilot's license and that of the field, where they are attached to a regularly organized field.

New Marketing Company in New England

BOSTON, April 29.—The New Haven Oil Corp. has been organized to do a tank car and jobbing business in all petroleum products in the territory about New Haven, Conn. G. V. Lassen, president, Ballard Oil Co., Hartford, Conn., is president of the new corporation and C. W. Lewis, who has been sales manager of the Cities Service Refining Co. of Massachusetts is vice-president and general manager.

The company's headquarters are at 140 River St., New Haven. It is building tankage at tide water for 2,000,000 gallons of petroleum products and its permit calls for a total of 7,000,000 gallons' storage. Facilities will be increased as the business warrants. Other present construction includes barge dock, boiler house, shop, warehouse, and loading racks for tank cars and tank trucks. Oil will be received by barge.

Mr. Lewis had been with Cities Service organizations 11 years, his first position having been as engineer with the National Petroleum Corp. of New Orleans. He was transferred to the Cities Service Refining Co. four years ago as assistant sales manager and had been sales manager the last three years.

T. M. Owen, assistant to E. K. Spellman, manager of retail sales, Cities Service Refining Co., East Braintree, Mass., has been transferred to New Haven, Conn., and district manager of the New Haven division of the company.

Correct Gaging of Tank Cars is Keynote To Keep Down Gasoline Losses

By Paul Truesdell
N. P. N. Staff Writer

CLEVELAND, April 28

HOW to gage a tank car of gasoline.

How to figure inage or outage in the tank car in gallons.

How to make volume corrections in gasoline for changes in temperature.

How to hold down losses of gasoline from the time it is invoiced to the jobber from the refinery loading rack to the time it cascades into the gas tank of the customer's car from the pump at the filling station.

These are four of the most vital problems of the marketer's business and judging from the number of letters of inquiry received by National Petroleum News from jobbers all over the country, they are four of the most troublesome. To get the answers to these problems, which are set down here, the writer talked to operating men of a large marketing company which is run on a sound engineering basis as well as a sound commercial basis.

The accompanying discussion of these points is to be taken as the methods employed by this successful marketing company, the name of which is withheld. The points will be taken up in order.

Gaging the Tank Car

THE usual method of gaging the car is to take a three-foot rule, lean down over the edge of the dome and measure as closely as possible the distance between the edge of the tank shell and the surface of the liquid in inches. This is when the tank is not shell full. This is rather difficult and unsatisfactory because the man doing the gaging has to look at the mark on the gage that is even with the top of the shell, at an angle which is likely to make his reading inaccurate. When the tank is overfull and the gasoline level is up in the dome, the practice is to lower the measuring rule down through the liquid until its end rests on the tank shell inside the dome and to read the highest point on the rule that is wet as the image in inches. This also is more or less deceptive because of the tendency of the gasoline to creep up the stick.

The company above mentioned has worked out a considerably better method. Instead of an ordinary three-foot rule, this company uses a double rule 30 inches long, which is the invention of one of its engineers. This measuring device consists of two parallel wood rules, fastened together by brass guides which permit their travel up and down. The rules are tipped with brass to prevent battering at the ends and at the same time to safeguard against striking a spark on the steel of the tank car. On one of the guides is a clamp operated by a thumbscrew that governs the movement of the rules.

The rules are marked off in inches and sixteenths of an inch, the numbering on one rule starting with zero at the bottom and ending with 30 at the top and its twin being numbered in the opposite direction, zero at the top and 30 at the bottom. The accompanying drawing shows how the measuring rule looks and the method of using it.

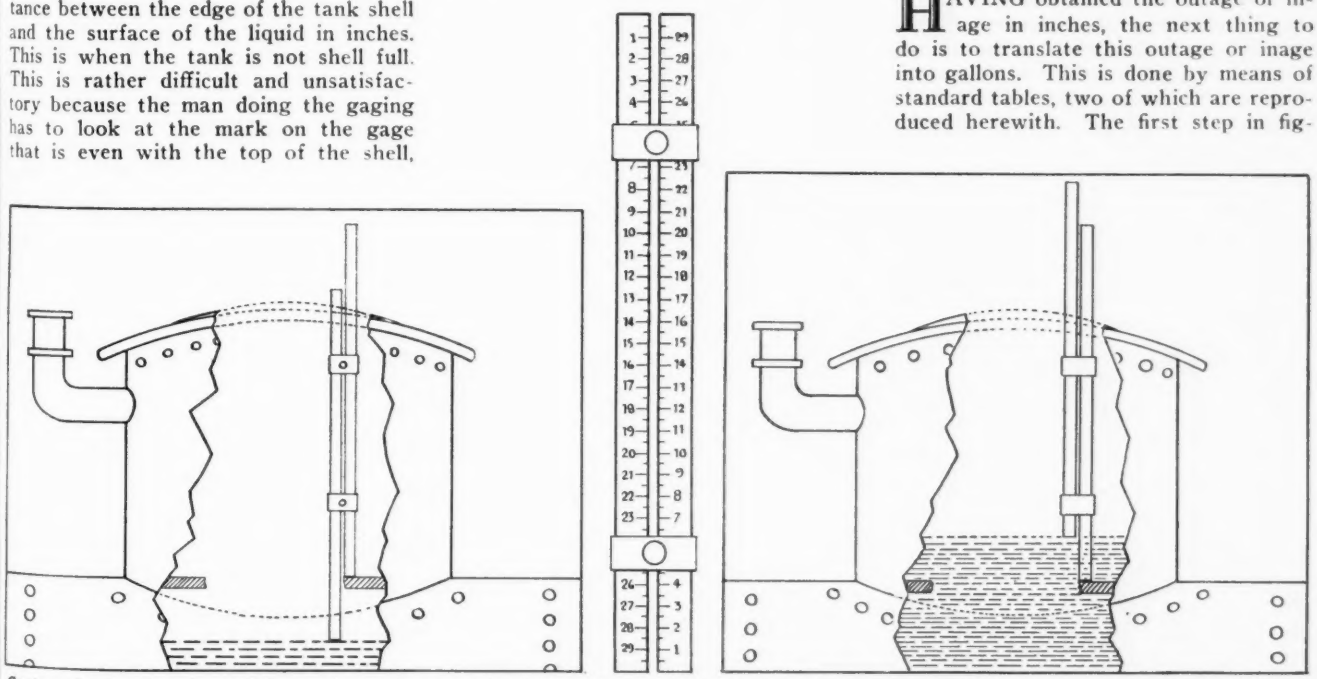
WHEN the gasoline level is below the top of the shell, the end of one of the rules is rested on the edge of the top of the shell. The thumbscrew is set to prevent the other rule from dropping down but not so tightly that it cannot be driven down by light taps on the top of it.

The man doing the gaging carefully taps the top of the free rule downward until the bottom of it just touches the surface of the gasoline, causing a ripple. The top of the free rule is then just opposite the figure on the stationary rule that represents the distance between the top of the shell and the surface of the gasoline and he can read the measurement easily and accurately, as compared with having to squint down through the dome to read it on an ordinary rule.

When the gasoline is up in the dome, the double rule is equally serviceable. In that case, one of the rules is pulled up well above the height of the gasoline in the dome and the end of the other is rested on the top of the tank shell. The thumbscrew is again adjusted and the free rule tapped down until it just ripples the surface of the gasoline. Then the measurement is read right in front of the reader's eyes instead of depending on the wet line on the stick.

Figuring the Outage

HAVING obtained the outage or inage in inches, the next thing to do is to translate this outage or inage into gallons. This is done by means of standard tables, two of which are reproduced herewith. The first step in fig-



Center, the double rule used for gaging tank cars which is described in the text. At left, how the rule is used in measuring when the gasoline is below the top of the tank. At right, how rule is used when gasoline is up in the dome

UNION TANK LINE CO.

OUTAGE TABLE

Cap. In. Out	6110 Gals. Out	6365 Gals. Out	6500 Gals. Out	8064 Gals. Out	10276 Gals. Out	10366 Gals. Out	12069 Gals. Out	12077 Gals. Out	13028 Gals. Out
½	8	5	6	6	6	17	7	2	5
1	19	11	16	15	18	36	20	11	17
1½	32	22	28	31	33	57	40	29	33
2	48	37	42	49	53	82	63	51	55
2½	66	54	61	70	73	111	89	78	80
3	84	72	81	93	97	141	118	107	107
3½	105	91	102	116	126	172	149	139	136
4	129	111	124	140	155	204	182	173	167
4½	153	133	147	167	186	237	216	211	200
5	178	157	171	199	220	272	252	251	236
5½	203	183	197	233	257	309	290	293	273
6	231	211	224	270	294	348	330	336	311
6½	259	240	253	308	332	389	371	381	351
7	288	269	283	347	371	432	413	429	392
7½	317	299	314	386	410	477	457	478	435
8	348	329	345	425	451	523	501	527	479
8½	381	360	377	465	495	570	547	578	525
9	414	392	409	507	540	618	595	632	571
9½	447	425	442	550	586	666	644	688	617
10	481	459	475	593	632	715	693	746	665
10½	516	494	509	637	679	764	744	804	716
11	551	530	544	682	727	814	796	862	769
11½	587	567	580	728	775	864	850	922	823
12	623	605	618	775	824	915	905	983	877
12½	659	644	657	824	875	967	961	1045	932
13	696	684	697	873	928	1020	1017	1108	989
13½	734	725	738	923	981	1074	1074	1172	1046
14	775	766	779	974	1034	1129	1132	1238	1104
14½	816	808	821	1025	1087	1185	1190	1306	1163
15	857	850	864	1077	1141	1242	1251	1375	1222
15½	899	892	907	1131	1197	1300	1312	1445	1282
16	941	935	951	1186	1253	1359	1373	1516	1345
16½	984	978	995	1242	1310	1419	1434	1587	1408
17	1027	1021	1039	1298	1367	1480	1497	1658	1471
17½	1070	1065	1084	1354	1426	1541	1559	1729	1534
18	1113	1109	1129	1410	1486	1603	1623	1801	1599
18½	1157	1153	1175	1467	1546	1665	1689	1874	1663
19	1201	1198	1221	1525	1606	1728	1757	1948	1729
19½	1247	1243	1267	1583	1667	1791	1825	2024	1797
20	1294	1289	1314	1641	1729	1855	1893	2102	1865
20½	1340	1335	1361	1699	1792	1919	1962	2180	1932
21	1386	1382	1409	1758	1855	1984	2030	2258	2000
21½	1432	1429	1457	1817	1918	2049	2100	2336	2067
22	1478	1477	1505	1876	1981	2115	2170	2415	2136
22½	1524	1525	1554	1936	2044	2181	2240	2494	2207
23	1571	1574	1603	1996	2108	2248	2310	2574	2280
23½	1619	1623	1652	2057	2173	2315	2381	2654	2352
24	1667	1672	1702	2118	2238	2383	2452	2735	2425
24½	1715	1722	1752	2180	2304	2451	2524	2816	2498
25	1763	1772	1803	2243	2371	2519	2596	2898	2571

UNION TANK LINE CO.

OUTAGE TABLE

Cap. In. Out	6110 Gals. Out	6365 Gals. Out	6500 Gals. Out	8064 Gals. Out	10276 Gals. Out	10366 Gals. Out	12069 Gals. Out	12077 Gals. Out	13028 Gals. Out
25½	1811	1822	1854	2307	2438	2588	2668	2980	2646
26	1859	1873	1906	2371	2506	2657	2741	3063	2721
26½	1907	1924	1958	2436	2574	2727	2813	3147	2796
27	1957	1975	2010	2500	2642	2797	2887	3231	2871
27½	2006	2027	2062	2565	2711	2868	2962	3315	2947
28	1056	2079	2115	2629	2780	2939	3038	3400	3022
28½	2106	2131	2168	2693	2850	3010	3113	3485	3098
29	2156	2183	2221	2758	2922	3082	3190	3571	3174
29½	2206	2235	2274	2822	2994	3154	3266	3657	3251
30	2256	2287	2327	2887	3066	3227	3343	3743	3327
30½	2306	2339	2380	2952	3138	3300	3421	3829	3405
31	2356	2391	2433	3018	3211	3374	3499	3915	3483
31½	2407	2444	2486	3084	3284	3448	3576	4002	3561
32	2457	2497	2539	3150	3356	3522	3654	4090	3639
32½	2508	2550	2592	3216	3429	3596	3733	4179	3719
33	2559	2603	2645	3282	3502	3670	3811	4267	3800
33½	2610	2656	2699	3349	3575	3744	3891	4356	3880
34	2660	2709	2753	3417	3647	3818	3972	4444	3961
34½	2711	2762	2807	3484	3720	3892	4052	4532	4041
35	2761	2815	2861	3552	3793	3967	4133	4620	4121
35½	2812	2868	2916	3619	3865	4042	4214	4709	4201
36	2863	2921	2971	3686	3938	4117	4295	4797	4281
36½	2914	2974	3026	3753	4011	4192	4376	4885	4363
37	2966	3027	3081	3820	4084	4267	4457	4974	4444
37½	3017	3080	3136	3887	4157	4342	4537	5063	4526
38	3069	3133	3191	3954	4230	4417	4618	5153	4608
38½		3186	3246	4021	4303	4492	4698	5243	4690
39				4088	4376	4567	4779	5334	4772
39½					4449	4642	4861	5425	4854
40					4523	4717	4943	5517	4937
40½					4597	4792	5025	5608	5019
41					4672	4867	5108	5700	5101
41½					4747	4942	5190	5791	5184
42					4822	5017	5273	5882	5267
42½					4897	5092	5355	5973	5350
43					4972	5167	5438	6064	5434
43½					5047	5242	5521		5518
44					5123	5317	5603		5602
44½					5199		5686		5687
45							5769		5771
45½							5851		5855
46							5933		5938
46½							6015		6021
47							6097		6104
47½							6180		6188
48									6273
48½									6358
49									6442
49½									6527
50									6612

Union Tank Car Co. outage table, figured in half-inches. It is strictly applicable, of course, only to Union Tank Car Co. cars

uring outage or inage is to find the capacity of the car. This is stencilled on the car tank, on the side or on the ends. Accurate gaging of the car, it is pointed out, is of utmost importance because no method of correcting temperature will give accurate results if it is applied to a wrong quantity.

The tables show the number of gallons per inch or half inch the gasoline is below the top of the shell. All that is necessary is to find the appropriate number of inches on the table, get the number of gallons represented by that many inches, and subtract the gallons short from the capacity of the car. This gives the actual contents.

If the tank car has gasoline in the dome, the procedure is even simpler. Accompanying is a standard table giving gallons per inch in domes of various sizes. All that is necessary here is to multiply the number of inches of gasoline in the dome by the number of gallons per inch in a dome of that size, as shown by the table, and add the result to the capacity of the car to get the actual contents.

Correcting for Temperature

THE next step is to make correction in the volume of gasoline for temperature. To do this it is necessary to know the temperature of the gasoline. This is determined with a thermometer. As is well known, the volume of gasoline is calculated at a standard temperature of 60 F. If the temperature is below 60 F. the volume of the gasoline will be less than at 60 F. If the temperature is higher the volume of gasoline will be greater. Usually the temperature is taken near the middle of the car.

There are several ways of making volume corrections for temperature. One much in use, although more or less rough and not used much by the more careful companies, is to deduce 1 per cent for every 20 degrees above 60 F. and add 1 per cent for every 20 degrees below 60 F.

As an example, suppose gaging shows the car to contain 8124 gallons and the temperature at which the car is received is 80 F. One per cent of 8124 is 81.24, therefore 81.24 gallons would be subtracted from 8124 gallons, making a total at corrected volume of 8042.76 gallons (8043).

Gallonage per inch in tank car domes

Diameter of Dome	Gallons per Inch
24 Inches	1.95
26 Inches	2.29
28 Inches	2.66
30 Inches	3.06
32 Inches	3.48
34 Inches	3.93
36 Inches	4.40
38 Inches	4.91
40 Inches	5.40
42 Inches	5.99
44 Inches	6.58
46 Inches	7.19
48 Inches	7.83
50 Inches	8.50
52 Inches	9.19
54 Inches	9.91
56 Inches	10.66
58 Inches	11.43
60 Inches	12.25
62 Inches	13.06

This is the standard table used for figuring gallons per inch in tank car domes of various sizes

IF the car contained 8124 gallons and was gaged at a temperature of 40 F., one per cent or 81.24 would be added, giving a corrected volume of 8205.24 (8205) gallons. The method used by the company mentioned has been worked out to a simple table giving the divisor to be used for correcting at all temperatures from zero to 100 F. The table is reproduced herewith.

Let us see how corrections made by this method check those made by the method just described. A car containing 8124 gallons of gasoline is unloaded at a temperature of 80 F. The 8124 is divided by 1.0120, the divisor for this particular temperature, giving a total of about 8027 gallons as against 8042 gallons by the 1-per-cent-per-20-degree method.

If the car was gaged at 40, the 8124 gallons would be divided by .9880, the divisor for that particular temperature, giving a result of about 8202 gallons as against 8205 gallons by the other method. Still another way is to multiply the number of gallons at the temperature gaged by a fixed multiplier that has been worked out in advance. Such a method was worked out by Dr. T. G. Delbridge of the Atlantic Refining Co. for the use of that company's marketing department and was published

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Form for Keeping a Daily Accounting of Gasoline at Bulk Stations

Days	On Hand Start of Day	Billed From Refinery at 60 F.	Over or Short Cars at 60 F.	Received at 60 F.	Total to Account for at 60 F.	On Hand End of Day at 60 F.	Delivered by Volume	Temp. Cor.	Gallons Delivered	Total to Account for	Actual Over or Short
1											
2											
3											
4											
5											
6											
7											
8											

on page 41 of the June 28, 1922 issue of NATIONAL PETROLEUM NEWS.

Let us see how the example worked out by the other two methods checks when worked by Delbridge's method.

According to his table for motor gasoline corrections, the volume of 8124 gallons at 80 F. would be arrived at by multiplying 8124 by .9881 which would give 8027 gallons at 60 F. The same quantity of gasoline at 40 F. would be multiplied by 1.0121, giving a volume at 60 F. of 8222 gallons.

By any method, of course, it is impossible to measure the amount to a gallon. It is an accepted rule in the trade that a car is not considered to be short unless the shortage is more than 50 gallons. On smaller shortages, they are just about equalized through the law of averages by slight overages on other cars. It will be seen that all three of the methods shown vary in results only a few gallons.

Holding Down Losses

THERE is a great deal of doubt and speculation as to how much is to be allowed at the ordinary bulk station for evaporation loss. The experience of the marketing company we are discussing and of other marketing companies with whose executives the writer has talked, would indicate the actual evaporation loss is very small indeed. This will appear later.

The first step in minimizing losses, of course, is to get all the gasoline out of the car in unloading. Theoretically, the siding on which the cars stand is level. Actually it often is not. After the car is unloaded the man in charge should see whether there is any gasoline in one end of the car that cannot flow to the outlet valve because the car is on a slant.

If there is, the men should move the car to a level stretch of track with pinch bars and draw out the remaining gasoline in 10-gallon or 5-gallon cans. Sometimes 20 or 30 gallons of gasoline will be left in a car by careless station men.

After the car is unloaded, the marketing company mentioned, keeps a day to day record of the gasoline and its losses are very small. There are no printed forms for keeping this record although printed forms might well be used. The record is kept on broad sheets of yellow ruled paper. Down the left hand edge of the sheet the days of the month are numbered from 1 to 30 or 31. The columns across the page are carried under the headings shown herewith.

When the man in charge of the station has filled out this form accurately,

Temperature Allowance for the Expansion or Contraction of Petroleum, Graduated in Degrees Fahrenheit, Basing at 60 Deg. F.

Temp. F.	Divide By	Temp. F.	Divide By	Temp. F.	Divide By
0	.9640	36	.9856	72	1.0072
1	.9646	37	.9862	73	1.0078
2	.9652	38	.9868	74	1.0084
3	.9658	39	.9874	75	1.0090
4	.9664	40	.9880	76	1.0096
5	.9670	41	.9886	77	1.0102
6	.9676	42	.9892	78	1.0108
7	.9682	43	.9898	79	1.0114
8	.9688	44	.9904	80	1.0120
9	.9694	45	.9910	81	1.0126
10	.9700	46	.9916	82	1.0132
11	.9706	47	.9922	83	1.0138
12	.9712	48	.9928	84	1.0144
13	.9718	49	.9934	85	1.0150
14	.9724	50	.9940	86	1.0156
15	.9730	51	.9946	87	1.0162
16	.9736	52	.9952	88	1.0168
17	.9742	53	.9958	89	1.0174
18	.9748	54	.9964	90	1.0180
19	.9754	55	.9970	91	1.0186
20	.9760	56	.9976	92	1.0192
21	.9766	57	.9982	93	1.0198
22	.9772	58	.9988	94	1.0204
23	.9778	59	.9994	95	1.0210
24	.9784	60	1.0	96	1.0216
25	.9790	61	1.0006	97	1.0222
26	.9796	62	1.0012	98	1.0228
27	.9802	63	1.0018	99	1.0234
28	.9808	64	1.0024	100	1.0240
29	.9814	65	1.0030		
30	.9820	66	1.0036		
31	.9826	67	1.0042		
32	.9832	68	1.0048		
33	.9838	69	1.0054		
34	.9844	70	1.0060		
35	.9850	71	1.0066		

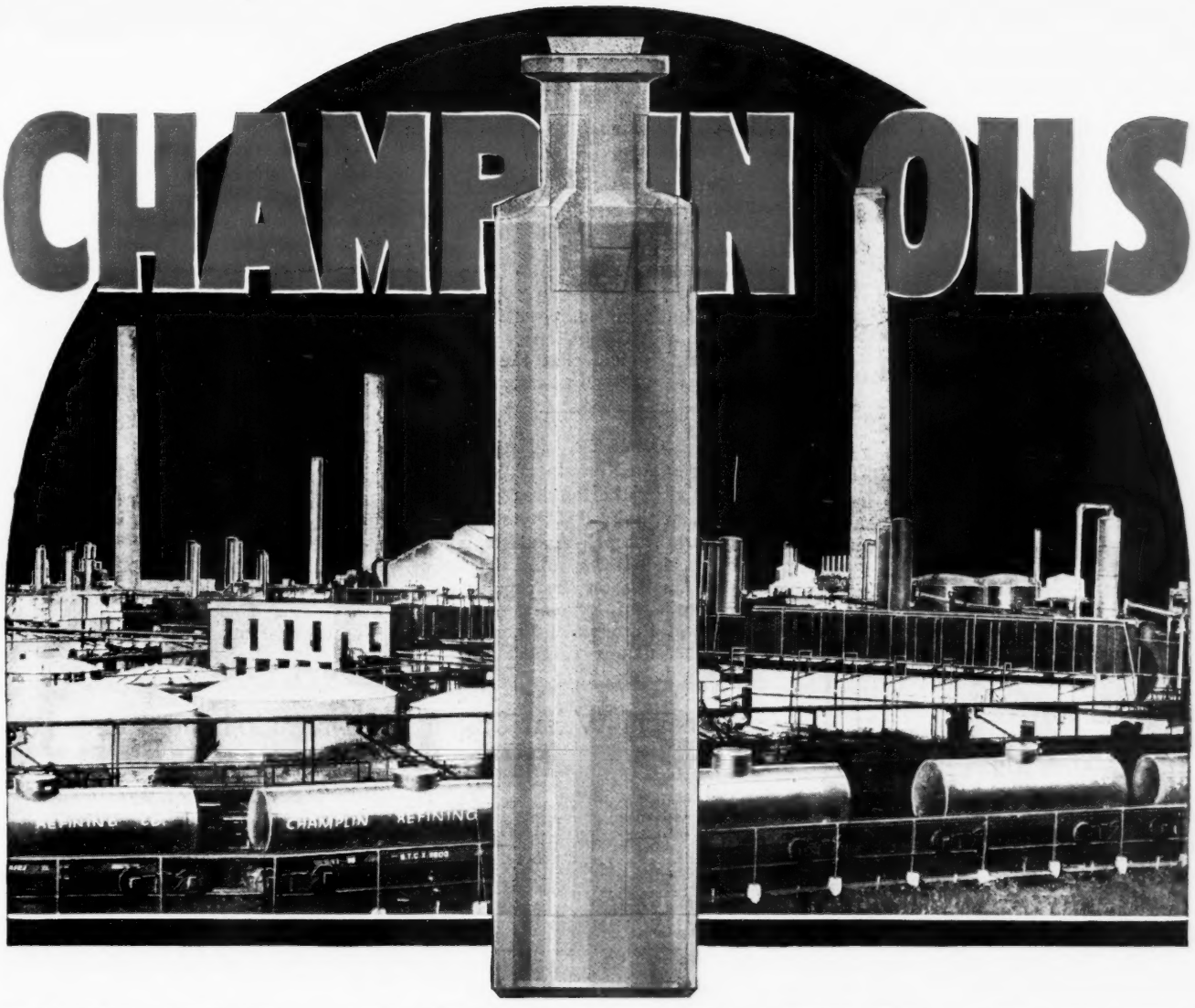
This is the table figured out and used by the marketing company discussed in this story for making volume corrections for temperature

TANK CAR OUTAGES IN GALLONS PER INCH

(Standard Table)

In.	5500 Car-Gals.	6000 Car-Gals.	8000 Car-Gals.	10,000 Car-Gals.	12,500 Car-Gals.	In.	5500 Car-Gals.	6000 Car-Gals.	8000 Car-Gals.	10,000 Car-Gals.	12,500 Car-Gals.
1	15	16	20	22	28	21	1312	1364	1613	1734	2047
2	42	45	53	58	64	22	1401	1456	1722	1852	2187
3	76	81	96	103	117	23	1491	1549	1832	1972	2339
4	117	124	146	156	181	24	1582	1643	1944	2094	2474
5	163	172	202	216	251	25	1674	1738	2057	2217	2620
6	213	225	264	282	329	26	1767	1834	2172	2342	2768
7	268	282	331	353	415	27	1861	1931	2288	2468	2918
8	326	342	402	429	505	28	1956	2028	2405	2596	3069
9	387	406	477	510	599	29	2051	2126	2523	2725	3223
10	452	473	556	595	699	30	2147	2225	2642	2855	3377
11	519	543	639	683	804	31	2244	2324	2761	2986	3533
12	589	616	725	775	913	32	2341	2424	2881	3118	3691
13	662	691	814	870	1026	33	2439	2524	3002	3251	3849
14	736	768	906	968	1143	34	2538	2625	3124	3385	4009
15	813	848	1001	1070	1263	35	....	2726	3246	3520	4170
16	892	930	1098	1175	1386	36	....	2827	3369	3656	4331
17	973	1013	1197	1282	1513	37	....	2929	3492	3792	4494
18	1056	1098	1298	1392	1643	38	....	....	3616	3929	4657
19	1140	1185	1401	1504	1775	39	....	....	3740	4067	4821
20	1225	1274	1506	1618	1910	40	....	....	3864	4205	4986

This shows the outage in gallons by inches when the gasoline level is below the top of the car tank



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making the temperature corrections in accordance with the method shown, he can't go far wrong. And this company's station men don't go far wrong. At the end of the month the columns are totalled and the actual overage or shortage for the month is figured by adding and subtracting pluses and minuses in the last column of the sheet.

The writer was shown two typical monthly sheets from one of this company's stations that handles about 20,000 gallons a day of high test gasoline. Over one month, this station showed a shortage of 132 gallons in the total of 600,000 gallons handled. The next month the station was 395 gallons over. Over the year it is found that the stations' overage and shortage just about balance.

YATES CENTER, KAN.—New names for its oil products have just been selected by the Peerless Oil & Refining Co., with headquarters at Chanute, Kan. Aeropel Aviation is the name of its high test gasoline and Aeropel Motor applies on the regular competitive grade of gasoline. Glowene kerosene and Puroflex oils and greases are the other names chosen.

George Willock Forms Marketing Company

PITTSBURGH, April 28.—George J. Willock, formerly vice president and part owner of the Waverly Oil Works Co. for 20 years, announces the formation of a new company to be known as the Willock Oil Corp. This company will conduct a general marketing business of petroleum and kindred products, including lubricating oils, fuel oils, gasoline, kerosene, greases, parafine wax, etc., with main offices in the first National Bank Building, Pittsburgh.

Associated with Mr. Willock in this new company will be M. G. Service, formerly of the Waverly Oil Works Co., serving finally in the capacity of sales manager of the industrial division. Also S. M. Hamilton, formerly with Pittsburgh Oil Refining Co. and Waverly Oil Works Co., and R. S. Campbell of both the aforementioned companies. Messrs. Campbell and Hamilton have, since September, 1926, had charge of the Pittsburgh offices of the West Penn Oil Co. of Warren, Pa.

Gulf Coastal Water Shipments, Mar. Compared with Feb.

(All figures in barrels of 42 gallons)

Company—Port	Coastwise Refined February	Coastwise Refined March	Export Refined February	Export Refined March
Standard of Louisiana				
Baton Rouge	1,245,763.00	1,014,498.00	559,510.00	711,430.00
The Texas Company				
Port Arthur	1,322,611.00	1,184,197.00	401,408.00	351,681.00
Gulf Refining Co.				
Port Arthur	2,563,584.07	2,312,867.68	35,596.19	97,167.16
Magnolia Petroleum Co.				
Beaumont	1,065,414.88	1,539,891.52*	.....	.....
Sinclair Refining Co.				
Houston	407,796.70	366,894.91	.....	98,203.00
Humble Oil & Refining Co.				
Baytown	1,154,706.64	1,656,805.55	567,521.82	1,064,549.50
Marland Oil Co.				
Texas City	.....	..... **	53,652.36	.....
Atlantic Oil Producing Co.				
Atreco	.....	.....	.....	.....
Galena Signal Oil Co.				
Houston	255,000.00	40,000.00	60,000.00	26,000.00
Deepwater Oil Refineries				
Houston	.....	.....	.....	.....
Keen & Woolf Oil Co.				
Houston	.....	.....	.....	.....
Pure Oil Co.				
Smiths Bluff	218,119.36	173,300.72	.....	.....
Totals	8,232,985.65	8,288,455.38	1,677,688.37	2,349,030.66

Company—Port	Coastwise Crude February	Coastwise Crude March	Export Crude February	Export Crude March
Standard of Louisiana				
Baton Rouge	453,838.00	523,750.00	70,056.00	53,873.00
The Texas Company				
Port Arthur	145,061.00	.....	.....	.....
Gulf Refining Co.				
Port Arthur	61,910.96	.....	.....	.....
Magnolia Petroleum Co.				
Beaumont	631,543.20	755,003.00*	.....	.....
Sinclair Refining Co.				
Houston	349,855.62	399,349.70	.....	.....
Humble Oil & Refining Co.				
Texas City	1,303,290.00	1,396,041.00	.....	.....
Neches Terminal	72,995.00	73,983.00	.....	.....
Ingleside	238,291.00	111,138.00	.....	.....
Baytown	654,414.00	771,485.00	.....	25,753.18
Marland Oil Co.				
Texas City	450,379.72	..... **	.....	.....
Atlantic Oil Producing Co.				
Atreco	193,348.87	468,552.44	.....	.....
Beaumont	124,050.65	382,112.54	.....	.....
Pasadena	281,646.50	270,283.87	.....	.....
Smiths Bluff	78,975.32	78,821.41	.....	.....
Swiftsure Petroleum Co.				
Texas City	284,672.00	365,834.00	.....	.....
Crown Central Pet. Corp.				
Houston	439,638.30	270,283.00	.....	.....
Pure Oil Company				
Smiths Bluff	575,403.30	808,695.58	.....	28,058.63
Sun Oil Company				
Sabine Pass	725,608.00	606,958.00	.....	.....
Totals	6,064,921.44	7,281,390.54	70,056.00	107,684.81

*Magnolia Petroleum Company makes no distinction in reports between coastwise and export shipments.
**No report.

Deeper Study of Oil Fire Causes Needed As Well as Prevention Measures

By H. E. Newell
Engineer, National Board of Fire Underwriters
Presented at N. P. A. Meeting, Cambridge Springs, Pa., April 28-29

BASED upon statistics of the U. S. Bureau of Mines, the total loss of noteworthy oil and well gas fires for the period 1908 to 1917 inclusive was $25,254,200. According to the statistics of the Actuarial Bureau of the National Board of Fire Underwriters, the yearly losses for the period 1916 to 1925 inclusive, but omitting those of 1919, which were not available at the time this paper was prepared, were as follows:

Year	Amount
1916	$ 5,070,100
1917	5,920,412
1918	6,471,119
1920	9,710,536
1921	9,420,343
1922	10,232,800
1923	11,183,421
1924	11,619,306
1925	12,721,548

By averaging the last seven yearly losses given by the National Board, in order to obtain some idea of the probable loss for 1919, it is possible to establish conservatively the total loss for the aforesaid 18-year period. Omitting the National Board figures for 1916 and 1917, and taking those of the Bureau of Mines 1908 to 1917 inclusive and those of the National Board for the balance of the period ending with 1925, we have a total of approximately $106,807,000.

Of course, this figure does not include losses incurred by companies carrying their own insurance and therefore not reporting to the National Board Actuarial Bureau. At first glance it would appear that the losses too had kept pace with the growth of the industry.

But is this the case? Let us compare them with the total value of the industry for a series of years. Let us take the period 1916 to 1925 inclusive, but omitting 1919. This comparison is shown by the following table:

Year	Annual Fire Loss	Total value of oil industry (hundreds of million dollars)	Annual Crude Production Barrels	Fire Loss per million dollars of Value
1916	$5,070,100	3500	300,767,000	$1448
1917	5,920,412	4125	335,316,000	1435
1918	6,471,119	4750	355,928,000	1364
1920	9,710,536	6000	442,929,000	1618
1921	9,420,343	6625	472,183,000	1422
1922	10,232,800	7312	557,531,000	1400
1923	11,183,421	8000	732,407,000	1398
1924	11,619,306	8666	713,940,000	1340
1925	12,721,548	9350	763,743,000	1360

The table shows that the value of the industry has increased from 3½ billions in 1916 to approximately 9⅓ billions of dollars in 1925. It also shows that except for the year 1920, the fire loss per million dollars of value has remained almost uniform, although with the exception noted, the figures actually indicate a very slight decline during this period.

While this is encouraging, indicating as it does that the fire loss of the industry has not actually increased, no material reduction in the fire loss has been attained. The claim might be made that these figures reflect the influence of fire prevention but it seems more reasonable to attribute them to the increasing use of all-steel tanks, and the industry's effort to reduce evaporation losses.

THE active co-operation of the oil industry in fire prevention matters dates back to about 1920, or about the time of the organization of the American Petroleum Institute. During this period some of the large companies have seriously studied many of their fire prevention and protection problems. The limitations of steam as an extinguishing agent have been determined; the ability of dikes to arrest boil-overs has been investigated and designs to improve their efficiency in this respect worked out; and improved methods of foam application established.

Considerable progress has been made in the design of vents, but so far the industry has taken no steps to determine necessary vent area requirements for tanks of varying capacity. In the industry as a whole, fire prevention has simply gained a foothold. To date, fire hazard study has largely been devoted to storage. While individual companies may have studied the hazards of refining processes, cracking, and casinghead compression plants, to my knowledge the results have not been given out for the benefit of the industry as a whole. In all the years of my contact with this general subject, I have yet to see a paper or an article on the hazards of these features of the oil industry.

With reference to storage, the greatest need is a more widespread knowledge of the lightning hazard and better means for its control. Lightning continues to be the chief cause of fires in oil storage tanks, and this is simply another way of indicating the cause for most of the industry's fire loss. Of the 503 fires recorded by the U. S. Bureau of Mines for the period 1908 to 1917 inclusive, 310 or 62 per cent were caused by lightning.

Along the Pacific coast the frequency of lightning storms in the past has been so slight as to create a sense of security on the part of the oil companies in that section of the country, but this has been rudely shaken by the large fires which occurred there due to lightning early in 1926. Incidentally, these fires will probably result in creating a high record fire loss for that year.

THE chief remedy is the all-steel, reasonably vapor-tight and well vented tank. It is well established that tanks so constructed and maintained are as safe from the lightning hazard as anything can well be. These are practically the words of the eminent British scientist, Sir Oliver Lodge, in an opinion rendered the British government following an exhaustive investigation and series of experiments. This opinion has also the backing of authorities in this country. For more convincing evidence, one has simply to study the actual record in service of all-steel tanks.

In my opinion, the wooden roof tank, no matter how well protected by elaborate extinguishing systems and means of protection against lightning, cannot be placed in the same category as the well maintained, all-steel tank. The prompt and reliable functioning of these systems are dependent upon too many details which in turn may readily be rendered useless by neglect or inadequate maintenance.

Nevertheless the energetic efforts of the Pacific coast companies to investigate and devise more reliable means to combat the lightning hazard cannot be too highly recommended. Apparently the conclusion has been reached that the "Cage System of Lightning Prevention" offers the best solution of this problem.

To quote Col. E. H. Wilcox of the Pan American Petroleum Corp., all other systems of lightning protection operate on the theory of offering a path, such as a tower or lightning rod for the discharge of the cloud to earth, on the theory that such a tower will attract to itself the direct stroke of lightning and pass it harmlessly to ground through proper conductors, and in so

You lose your full profit on every gallon of gas that the customer pays for but doesn't get!

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GASOLINE REGISTER COMPANY
4619 Ravenswood Avenue - - CHICAGO

doing will protect an area in the immediate vicinity of the tower from receiving this hit direct.

THE Cage system of lightning prevention differs from all others in its basic theory. It proposes, not to catch and direct the stroke when it occurs, but actually to prevent the occurrence of the stroke by gathering up the induced charges on the ground and on reservoirs and tanks as rapidly as they are imposed thereon, whether by the influence of the charged cloud, or brought down in the charged raindrops, and to release this charge by ionization over a time and space interval, returning this charge direct to the cloud and so reducing its potential, and hence its ability to discharge, by breaking down the air dielectric intervening between cloud and earth.

In brief, the Cage system aims at the reduction of the charge in the cloud and on the earth so that no discharge takes place. In an excellent article recently published in the NATIONAL PETROLEUM NEWS, Col. Wilcox gives a complete description of the practical application of this system.

Thus the industry climbs up another rung on the fire prevention ladder of progress. But why wait until a disastrous fire demonstrates a hazard? Real fire prevention demands a constant study of processes and practices in order to discover the real hazards. Such study frequently points the way to the needed remedy.

In the field of compressed gases and the pyroxlin, plastic and allied industries, the probable hazards are anticipated through experiments and research, so that when manufacture in production quantities is started, the hazards of the processes are mainly established and safeguards provided. This is simply good business for any industry involving inherent hazards.

ANOTHER means of obtaining valuable information is through a study of the fire record. Every fire teaches a lesson but the lesson is not always clearly apparent. In determining safeguards for a new process the experience gained through other fires where this process was involved is of pronounced value.

This procedure is followed by technical committees of the National Fire Protection Association; as a matter of fact, it is the first procedure following assignment of a new subject.

The American Petroleum Institute has endeavored to maintain complete fire records of the oil industry. The importance of this cannot be underestimated. Already this record has aided materially in the solution of the knotty problem incident to the spacing of above-ground storage tanks. But to be of real value, these records must be studied and the results disseminated through the industry.

As an illustration, the records of the last 10 years indicate that unprotected structural steel supports for tanks has been one of the chief contributing fire causes at marketing stations. They also indicate tank truck loading operations as probably the principal fire cause, and demonstrate the need of non-combustible construction of station warehouses and other buildings.

In brief, these records furnish sufficient data for the drawing of suitable fire prevention requirements for marketing stations. Indeed, this might well be the work of a special idustry committee.

IN the oil industry the field for research along fire prevention lines is a fertile one. At present, whenever an oil fire occurs, it seems to be the practice, in the absence of definite knowledge as to the real cause, to narrow the field of investigation to a few possible causes and then choose the one that appears to be the most plausible. As a rule, this means that static electricity, or the ignition of a favorable mixture by a spark from a locomotive, or a lantern in the hands of some employee is decided upon as the probable cause, when as a matter of fact, the fire was actually caused by some other means.

A study of some fires has indicated that possibly the presence of hydrogen sulphide on the underside of tank roofs may be the explanation of many mysterious fires. Recently the catalytic action of certain metals in contact with hydrocarbon vapors has been indicated as a possible cause. These possible causes need verification through research and experiments but tend to bear out the statement previously made that the field for research is a rich one.

This association is apparently impressed with the importance of fire prevention as illustrated by the formation of fire brigades in the plants of its membership. It seems probable that these organizations devote their principal efforts to the maintenance of good housekeeping and fire drills. These are indeed important factors, but deeper study of the fire prevention problems which each plant presents is urged.

Fire prevention is occasionally held up as a propaganda of the insurance companies and inspired by selfish motives. A little consideration of the subject will prove how erroneous this idea is. The oil industry can engage in no effort at this time that will prove more profitable than fire prevention. Such a movement vigorously prosecuted in all branches and details will mean increased production, economic storage and reduction of evaporation losses, and what is of considerable importance, more money in the pockets of the oil companies. Fire prevention too spells conservation of our national resources.

GLASCO, KAN.—McCollough Oil Co. planned to open its new service station for business here on May 1 handling Skelly products, according to F. R. McCollough.

SELL MORE OIL
from
BOE BOTTLES

They make a beautiful display.
They are designed on the right principle.
They just fit the hand.

BOE SERVICE SETS
and
DISPLAY RACKS
Speed Up Service

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Manufacturers of
Oil Pumps, Grease Pumps, Grease Kits, Grease Guns, Lubricating Units
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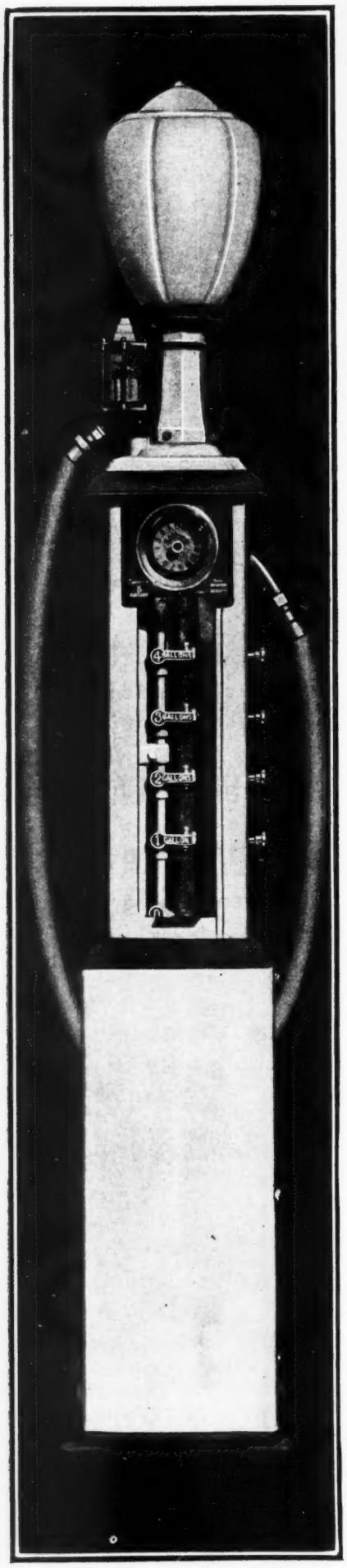

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Our newest RINGBELL Pumps, equipped with or without attractive See-Gage as illustrated, and other refinements, are easily the finest of their type we have ever made.

No other pump has all the unusual Ringbell advantages—famous Shotwell BALL BEARING mechanism, unequalled registering meter that makes it impossible to "milk", complete lubrication from one hole, driving mechanism entirely enclosed, additional stops on the side for convenience of operator and customer, bell rings at every gallon, fewest number of parts, easy side installation.

A refined mechanism that is now in its eighth year of serving particular jobbers.

SPEEDWELL *Straight "8" Visible*

(Companion Pump of Ringbell.)

Eight easy turns of the handle send five gallons of gasoline into the visible bowl—and in only 5 to 7 seconds. BALL BEARING pump mechanism. Speed of service that fills two cars instead of one, with an ease and simplicity of operation that no other pump can equal. Positive stop discharge or eye measure.

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PUMPS

APPROVED BY NATIONAL BOARD OF FIRE UNDERWRITERS

California Companies Leasing Stations To Individual Operators

By William E. Green
N. P. N. Staff Writer

LOS ANGELES, April 29

DURING the past year in California more than 400 oil company owned service stations have been leased to individuals. That the experiment is proving worthwhile is attested by the fact that three major companies on the west coast are continuing the practice. One of these companies, in fact, is now operating very few stations with its own men.

A check-up early in April disclosed that the Associated Oil Co. has leased 230 stations in California. The Standard Oil Co. has leased out about 150 company-erected stations, while the Union Oil Co. has also leased a considerable number, although exact figures are not available.

In selecting men to take over and operate the stations, officials of the companies favor men already in their employ and who show promise of being stable enough to make good while working for themselves. Naturally among employes at service stations are found men who make good workers when the responsibility belongs on other shoulders, but who have not the ability and stamina to make good when they are their own bosses. These men are avoided in making leases.

IT is rather interesting to learn that practically every station leased out has shown an increase in gallonage, almost from the day the former employe took it over. In the instance of the Associated Oil Co. leases are made with the condition that it can be cancelled on 10 days notice. Very, very few leases have been cancelled so far. Other companies follow similar lines. Naturally, every station leased sells 100 per cent the products of the lessor company.

The oil companies have found the venture very much worthwhile in a majority of instances. Their own products are still sold from the station, the men leasing the stations no longer "watch the clock," gallonage increases and the heavy overhead selling cost is greatly reduced. Their former employes are business men, the greater the gallonage the greater the profits. A few extra hours of work daily mean nothing to them when working for themselves. Every extra gallon of gasoline they sell means an extra 4-cent profit for that day. Every new friend means additional business and more profit.

THE writer early in April stopped at an Associated leased station at San Jose, Cal., and found that two young men had two weeks previously leased the station, which had a grease rack in connection. One of the partners remarked that they had experienced some bad weather during the previous few days, but in spite of that, their gallonage had increased.

Associated Oil Co. station at Paso Robles, Calif., leased to B. F. Ramage Jr. This station is a typical Associated station, except for large sign showing that station is leased and not operated by company. Mr. Ramage is standing in front of station and his employe in white is busy at the pump

Before leasing, the two men worked at the station in eight-hour shifts, in addition to a third man. While operated by the company four men had been employed, the fourth man operating the grease rack. Under the lease plan, the two young men dispensed with the services of one man, keeping the grease rack operator on duty.

The lessees are working longer hours, and as they know many people in San Jose, they are already building up their greasing business, and every new grease rack customer means a new customer for the gasoline pump, and another purchaser of lubes.

ANOTHER instance of increased business secured by a former employe who became his own boss, was found at Paso Robles, Cal. B. F. Ramage, Jr., on Aug. 4, 1926, after working at the Associated Oil Co. station three months, leased the station. He stated that his earnings are greater than had been his salary, he mentioned that he was his own boss—they all do that—and he pointed with pride to his new Buick sedan standing on the station lot. He had never been able to afford so good a car until he went into business for himself.

During the dull season, November to January, Mr. Ramage operates the station himself and alone, but with the coming of spring he was forced to hire a young man to help out. He found that it paid him to open early and keep open late. Long hours seven days a week were a little too much for him. Mr. Ramage is alive and on the job. He is around the station most of the time, even when he is supposed to be off duty. He greets every customer, has a pleasant word for all, and never forgets to invite them to come back. The writer handed Mr. Ramage a copy of National Petroleum News and he immediately began to glance through the ads, remarking that so many cars these days had trunks at the rear that his present nozzle was hardly suitable, and he wanted to look up some advertiser offering a nozzle that would fit his needs. Mr. Ramage is thinking of a grease rack for his station, and as the writer drove away he was still reading the ads in National Petroleum News.

IT has been found that the leased stations are being operated at a lower cost than when run by the large company. The original idea of the company-owned and operated station was to insure sale of the company's products, exclusively. The leasing method attains the same end, and the company is relieved of a large expense. It has been found that most of the company-owned stations are operated at a cost of about 6 cents a gallon, sometimes 7 cents. The leased station operator is allowed the regular 4-cent differential. This makes it possible for the company to lease the station and equipment at

ROBERTSON METAL SIGNS

THERE are three ways to get a correct line on Robertson Metal Signs.

1 Watch for them. You will find them in the highways and byways from coast to coast, advertising products such as

Central Petroleum Co.
Commercial Oil Co.
Franklin Oil & Gas Co.
Magnolia Petroleum Co.
Merit Oil Equipment Co.
Paragon Refining Co.
Pennzoil Co.
Pierce Petroleum Corp.
Seaboard Midland Petroleum Corp.
Tokheim Oil Tank & Pump Co.
Harris Oil Co.
Phoenix Oil Co.
Transcontinental Oil Co.

and scores of well known firms in the same and other fields.

2 Take note of the outstanding firms that use them — the popular brands they are associated with.

3 Write the factory for an assortment of Robertson signs for personal inspection.

Do these three things and you will discover the reason why scores of the heaviest sign advertisers specify Robertson when ordering metal signs.

The Robertson Steel & Iron Company
Elwood-Myers Co. Div.,
Springfield, Ohio

Let us Quote on Your Requirements

a very nominal amount, according to conditions at each station.

And last but not least, the bootlegger offering a lower grade of gasoline at a lower price gets no welcome at one of the company-owned but leased stations. Neither has the peddler of various and sundry grades and brands of lubes any chance whatever to do business. The station must handle only the products of the company which leases it.

The sales department of one of the larger companies last year made a close check of service stations in southern California and found in round numbers that there were about 550 company-owned and operated stations against about 6000 Independent owned stations, and places where gasoline could be purchased. This 6000 included garages where gasoline was sold and also included small roadside lunch stands where one pump was operated.

This count, taken with the movement of leasing large company owned stations to individuals, makes it appear that an individual, who is on his toes, can operate a servce station at a lower cost than can a large oil company.

New Equipment to Improve Plants

Personal Notes of the Manufacturers

National Petroleum News

Wilson-Snyder, Pittsburgh, manufacturers of heavy duty pumps for cold and hot oil, have sent out a questionnaire to refiners asking for their detailed requirements in hot oil pumps. The questionnaire contains 12 questions with blanks left for their answers. It is stated that the company engineers are familiar with the pump requirements of all important cracking processes. The Wilson-Snyder pumps operate at oil temperatures from 350 to above 800 F., and at pressures from 15 to 1500 pounds, it is stated.

* * *

Botfield Refractories Co., Philadelphia, has issued a folder describing the company's new Adamant gun. By the use of this gun, it is claimed, furnace linings can be restored to good condition whenever the equipment is shut down for a short time. The gun is used for blowing protective coatings on brickwork in the form of mixtures of Adachrome and Adamant fire brick cement which also are products of the company.

* * *

Air Reduction Sales Co., 342 Madison ave., New York, has put out in booklet form a paper on "Pipe Line Welding from the Oxy-Acetylene Viewpoint," which was delivered by LeRoy Edwards of the company's industrial engineering department before the New York section of the American Welding Society, Dec. 21, 1926.

* * *

The United States Cast Iron Pipe & Foundry Co., Burlington, N. J., has put out a booklet entitled "Controlling Temperature and Bending Strains in Bronze Welded Cast Iron Pipe Lines." The authors of the booklet are E. Hering, F. G. Outcalt and T. W. Greene.

* * *

Williams Oil-O-Matic Heating Corp. announces that the annual convention of the company's dealer organization will be held at the home office, Bloomington, Ill., June 6-7. Arrangements are being made to take care of 2500 dealers, salesmen and service men.

The Wilson-Snyder slush pump No. 18 for deep drilling is a new addition to the heavy duty pump equipment built by Wilson-Snyder, Pittsburgh, Pa. It has been developed to meet the demand for deep hole rotary drilling by this company which has been building heavy duty pumps for over 50 years. Description of the new device can be obtained by writing the company at Pittsburgh.

* * *

Julius P. Heil, vice president and general manager of the Heil Co., Milwaukee, is making a business trip which is taking him through Florida, Cuba and the West Indies, Central America and through the Panama Canal to California, according to the Heil Quality News, the company's new house organ. Mr. Heil is accompanied by Mrs. Heil.

* * *

The southwestern district sales office of the Chicago Bridge & Iron Works which for several years has been located in the Praetorian building, Dallas, Tex., has been moved to the Dallas National Bank Building.

* * *

The Crouse-Hinds Co., Syracuse, N. Y., has put out Folder No. 50 describing its new "Obround Condulets, Form 7."

* * *

International Derrick & Equipment Co. announces the removal of its New York office on May 1 to Room 909 Trinity place. The office is now located at 30 Church st. A. L. Woracek is the company's eastern representative.

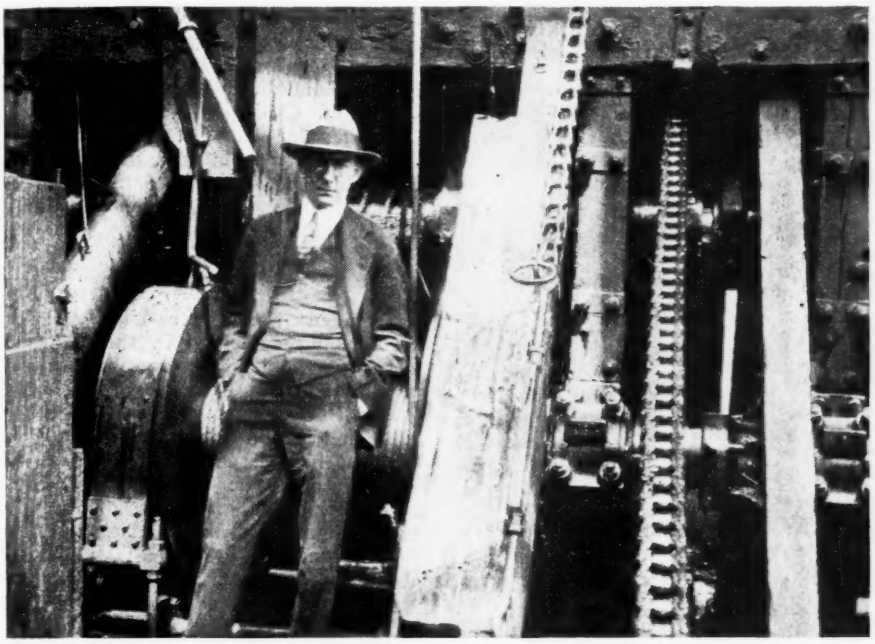
TULSA, April 29.—H. S. Lindenmuth, formerly district manager for the International Supply Co., has joined the organization of the Lucey Products Corp., with headquarters in Tulsa. He will specialize on Lucey rotary drilling equipment and will further the introduction of Manganese steel to the oil industry. Mr. Lindenmuth's appointment was announced by Frank E. Bernsen, vice-president.

Comments from California

By William E. Green

N. P. N. Staff Writer

National Petroleum News



A. E. WALDORF

Advertising manager of National Petroleum News, on derrick floor of Chanclor-Canfield-Midway Oil Co.'s Olinda 96 in Orange County, Calif., deepest hole in world. Bottom of hole at 8046 feet. He wanted to see what the machinery looked like. Hole was being bailed for test day he visited well

ACCORDING to Union Oil Co.'s report covering first three months' operation in 1927, earnings showed net profits of $2,600,000 after deductions for depletion, depreciation and taxes against $2,700,000 for same period in 1926. Sales for three months amounted to $18,070,000. Stocks of crude oil and other petroleum products as of March 31, 1927, approximated 19,400,000 barrels, an increase of nearly 1,400,000 barrels when compared with figures for Dec. 31, 1926.

◈ ◈ ◈

E. M. Smith, president of Emsco Derrick & Equipment Co., Pacific National Bank and a number of other business concerns in Southern California, left Los Angeles recently for New York from which point he will sail for a tour of foreign oil fields, visiting important centers in Europe before returning home some three months from now. He is accompanied by his wife and his nephew, Morris Smith.

◈ ◈ ◈

R. S. Blatchley, former chief geologist for Sentinel Oil Company of California, has opened an office in Los Angeles at 817 Roosevelt Bldg., as a consulting geologist. He is a son of W. S. Blatchley, who was Indiana State Geologist for 16 years.

◈ ◈ ◈

Standard of California in its policy of retrenchment has stopped work on installation of new cracking units at its El Segundo refinery.

Independent Producers Agency, an organization of smaller operators in Kern County, Calif., producing heavy oil, during 1926 marketed for its members 16,323,139 barrels of oil with a total value of $14,050,954. Marketing costs amounted to 4 mills per barrel during the year. L. P. St. Clair, president for 18 years, was re-elected, and W. B. Robb was also re-elected secretary.

◈ ◈ ◈

A meter that will correctly measure the flow of an oil well has long been a dream of the producer, and such a device is now going through rigid field tests in California. Most of the "kinks" have already been taken out of it.

◈ ◈ ◈

According to the annual report for 1926, the California Petroleum Corp. at the close of the year had a total refining capacity of 55,000 barrels, and since that time two Holmes-Manley cracking units have been installed.

◈ ◈ ◈

A shock absorber for pumping oil wells to take the "whip" out of sucker rods is being tried out in California and tests indicate it will be a success. The inventor is not quite ready to "tell the world" of his new device.

◈ ◈ ◈

The Shell Company of California is reaching into Arizona for business, recently having completed a large service station at Flagstaff.

Good Will

is an important factor in any successful business. The Humble Oil & Refining Company appreciates that to hold your good will it is necessary to supply you with products, the sale of which will gain and hold the good will of your customers.

Humble Motor Oils satisfy. They are produced only from high-grade cold-test crudes and are "straight run." They are not mixed or blended. Humble Motor Oils are of a clean, beautiful amber color and have just the right body to properly lubricate all bearing surfaces, and when burned leave little carbon to foul the motor or contaminate the crankcase mixture.

Humble Oil & Refining Co.

Houston, Texas

Producers - Pipe Lines
Refiners - - Marketers

"Zero Cold-Test Oils"

HUMBLE OIL & REFINING CO.
HUMBLE OILS
Reg U.S. Pat Off.
HOUSTON, TEXAS

Our Industry—A Page of Facts and Personalities

National Petroleum News

By Paul Wagner

PRESIDENT LEVI SMITH of the Big Lake Oil Co., operating in the field of the same name in southwestern Reagan county, Texas, believes in progress. That fact is exemplified in the contract of his company with the Pecos Valley Utilities Co., which is soon to provide electric power for the operation of the field.

Pecos Valley Utilities Co. is a subsidiary of the Kansas City Power & Light Co. It proposes to dam the Pecos river for water power to generate electricity, which will be used in oil operations at Big Lake and elsewhere. Major operators in Upton and Crane counties are reported considering the use of electricity in the Hurdle district, McElroy ranch and Church & Fields (University pool) areas.

In the Big Lake field, the Big Lake Oil Co. will equip all its pumping wells with electric motors and, in addition, will use current for drilling. Contract for the installation at Big Lake calls for electrical operations by July 15, next.

* * *

GULF COAST ENGINEERING CO., with offices in the Dooley bldg., Houston, has been formed by G. M. Dougherty and R. G. Larson, who are featuring a coastal map which shows all salt dome areas, escarpment fields and gas territories. The map covers 58 Texas counties and parts of seven Louisiana parishes. It shows all surveys and headrights within each county, each being named or numbered.

The map is drawn on a scale of one inch to 6000 varas, or approximately three miles to the inch. The area covered by the map begins at the northeast corner of Shelby county, Texas, and extending in a southwesterly direction, approximately paralleling the gulf coast, it crosses the northwest corner of Webb county into old Mexico for about 25 miles.

* * *

WALTER W. STEIN, for 17 years with the Border Gas Co., at Laredo, and for 10 years assistant secretary-treasurer, has been named vice president and general manager. He succeeds the late Dr. M. P. Cullinan, who died suddenly on his sixty-second birthday anniversary, several months ago. Leo Wright of Laredo succeeds Mr. Stein as assistant secretary-treasurer.

* * *

CLYDE M. BENNETT, vice president and general manager of the Louisiana Oil Refining Corp., Shreveport, recently departed on a trip to Trinidad, B. W. I., on business.

THE accompanying picture, taken on a field trip, shows from left to right: D. O. Bayless, head of the land department of The Texas Co., at Fort Worth; E. H. Krippen, formerly with the company in west Texas; and L. E. Barrows, division general superintendent at Fort Worth.

Judging from the rolled-up shirt sleeves and the character of the terrain they might have been previously engaged in rectifying the damage of a mesquite thorn in contact with one of the tires; but circumstantial evidence shouldn't be taken too seriously. Probably they would be looking less pleasant than the picture shows had any such emergency materialized.

* * *

BEN ROGERS, formerly in charge of the abstract and title department of Marland Oil Co. of Texas, at Fort Worth, is now in the land and lease department of the Roxana Petroleum Corp., at Dallas. Rogers, before coming to Texas several years ago, was in the land department of Gulf Refining Co. of Louisiana, at Shreveport.

* * *

JAMES W. BRADBURY, assistant to the general agent of the Mexican Gulf Oil Co., at Tampico, is back at his desk after a vacation spent in Houston; E. A. Clarke, assistant purchasing agent at Tampico, is also on the job again after a month spent in The States.

* * *

R. O. DULANEY, president of the R. Fort Ring Oil & Gas Co., and J. P. Johnson, individual operator, are principal owners of the new 14-story Petroleum building under construction at Fort Worth. The structure, which will be an important addition to Fort Worth's skyline, is due to be completed about Oct. 1.

* * *

JAMES M. DOUGLAS, general manager of the Venezuela Union Oil Co., which was formed to operate Maracaibo properties owned jointly by Union Oil Co. of California and the Pantapec Petroleum Co., is drawing part of his staff from the Rocky Mountain territory. Douglas, who was formerly Rocky Mountain chief geologist for the Union of California at Fort Collins, Colo., has drafted W. C. Maxfield from the field department to assist him. Mr Maxfield first became connected with the Union in the Orange, California district in 1920.

* * *

FRANK A. EDSON, who superintended the Cortez-La Atlantica core-drilling campaign in the Tampico district several years ago, before returning to the service of the United States Bureau of Mines, is the author of a bulletin on diamond drilling that has just been issued by the Bureau at Washington. The bulletin, No. 243, is an authoritative discussion of the use of the diamond drill for oil exploratory work, totalling 170 pages. Mr. Edson now lives at Norman, Okla.

* * *

MAGNOLIA PETROLEUM CO., with Dallas headquarters, grew from a small organization under a different name at Corsicana, in 1896, to its present magnitude without making use of a geological department. Recently, it placed a competent geologist, George E. Dorsey, in charge of this kind of work. Some of Dorsey's friends, remembering the Magnolia's history, undertook to "kid" him recently. When Dorsey answered the telephone he was asked:

"Is this the geological department?"

"I am," he is reputed to have answered.

* * *

OSCAR T. NORVELL has been transferred by Magnolia Petroleum Co., from Westbrook, Texas, to Odessa, where he will be chief clerk to Superintendent J. M. Dawson. Lee Cummins, warehouseman at Burkburnett, succeeds Norvell as chief clerk to Superintendent C. V. C. Bradley at Westbrook. W. G. Crockett has been transferred from the Dallas office to Archer City as assistant office man under Superintendent R. T. German.

* * *

A WEST Texas office is being established at San Angelo by Peer Oil Corp., in charge of Roger Smith, formerly of Tulsa. Decision to establish a west Texas division office followed a recent trip to the territory by R. M. Briggs of Tulsa, vice president; R. L. Young of Houston, a director; and Mr. Smith. Peer plans a test in Howard county, between Iatan and Coahoma, on acreage recently blocked.

Visiting Around the Refineries

By Paul Truesdell

National Petroleum News

The First Step Toward Patent Certainty

THE decision handed down by Judge Morris in the federal court in Wilmington, Del., on April 22 in which he found one of the Cross patents on cracking to be valid, is the first time, so far as we know, that any one of the scores of patents purporting to cover the various phases of cracking oil, has been brought to a court decision.

To be sure, Judge Morris' decision does not end the matter; the American Refining Co., which lost the suit, plans to appeal as stated on page 17 of the April 27 issue of NATIONAL PETROLEUM NEWS. But the decision rendered is at least a start toward clearing up the situation.

And it needs clearing up. Of the 465 refineries in the country on Jan. 1, as shown by the Bureau of Mines report, 169 have cracking plants. These plants are capable, it is estimated, of producing one-third of our gasoline supply, or around 90,000,000 barrels a year. And every one of these cracking plants is operating without knowing where it stands as to the patents on which it is paying royalties or when the plant may be judged an infringer and assessed heavy damages.

We don't know what the investment in these cracking plants is but it would seem that $100,000 is a fair average cost of cracking installations, perhaps it is too low. At this figure, there is $16,900,000 invested on a basis of utter uncertainty.

A Welding Job That Is a Job

NINE Texas Co. welders and helpers made 844 welds in putting up a two-battery job of 600 class Holmes-Manley stills at the West Dallas plant of the company, without having a single leak show up when the job was tested. This is recorded in the April issue of *The Look Box*, the organ of the refining department of the company. It is stated that all the welds on the preheaters were made with the tubes in place in the tube sheet and not tested until all were completed. On the entire job, including the pump-house manifold, there was only one leak that had to be re-welded. This is suggested as a record in welding work.

The same issue of *The Look Box* introduces to their fellow workers, H. M. Snyder, superintendent of shipping and receiving at the Port Arthur plant and T. P. Halloran, foreman of crude stills at the same plant. It is said Mr. Snyder has his department so systematized that he can tell the unit cost per drop of water used for washing barrels in the cooper shop.

Mr. Halloran is the proud father of 10 children, five boys and five girls.

New Insulated Tank Cars for Asphalt

THE *Union Oil Bulletin*, official organ of the Union Oil Co. of California, carries photographs of the company's asphalt plant at Wilmington, Cal., showing the asphalt loading rack, storage tanks, and new insulated cars for shipping the stuff, of which a number has recently been placed in service. We suppose the asphalt is loaded hot, like putting hot coffee in a thermos bottle, and the insulation is to keep it hot so it can be unloaded easily.

Increasing Business to Reduce Overhead

REMARKABLE increase in the output of products from the refineries of the Sun Oil Co. was announced by President J. Howard Pew of the company at the company's annual sales conference held in Philadelphia last month. About two years ago, Mr. Pew said, it was decided that the best way to cut down the mounting overhead was to increase the volume of business.

Since that time, the output of the company's Yale, Okla., refinery has been doubled and it is expected shortly to increase it 50 per cent more. At the Toledo, O., refinery, facilities for obtaining more crude have been put in and the refinery has been improved so that it is producing 60 per cent more products than it was two years ago. At Sun Station on the Neches river, below Beaumont, Tex., the company has built a terminal for gathering, storing and shipping oil and a greatly increased supply of Texas crude will now be available for the Marcus Hook refinery.

Considerable construction work on new units is going on at the latter plant, which is expected to be finished about May 1, Mr. Pew said. The company is bringing out a new line of lubricating and specialty oils. Besides other executive and sales officers of the company, Arthur E. Pew, Jr., chief engineer of the manufacturing department. W. D. Mason, manager of the Marcus Hook refinery, H. O. Cameron, manager of the Yale and Toledo refineries and A. Ludlow Clayden, research department, addressed the conference.

Training Men for Bigger Jobs Ahead

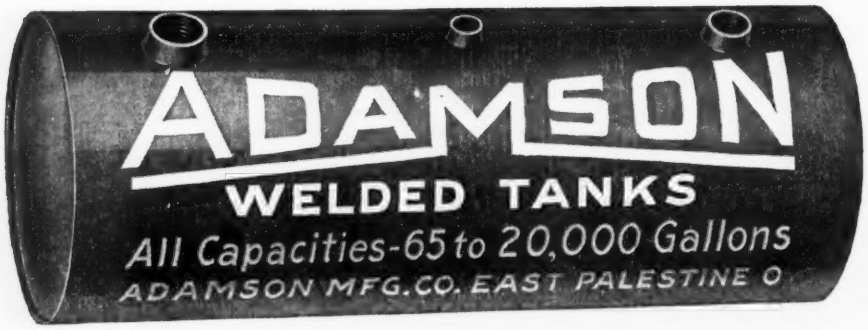
THE *Atlantic Seal*, house organ of the Atlantic Refining Co., celebrates with an article and the photographs of the men, the graduation of Flying Squadron No. 1 from the refinery's apprentice school at Point Breeze. There are nine of these men and they have had a year of schooling under the auspices of the training department of the industrial relations division.

The men are graduated as riggers, electric welders, pipe fitters and boilermakers. That does not mean that some of the men learned one trade and some another. All learned all of them. Flying Squadron No. 2 has just been started. In this course, carpentry will be added to the four crafts included in the training of the first squadron.

Foremanship is the goal toward which the training of these men is aimed.

American Refining Methods for Egypt

TWO young men, under the sponsorship of the Egyptian government, are studying American refining practice at the plant of the Marland Refining Co., Ponca City, Okla. They are Abdel H. Difrawi, 26 years old and A. H. Fahmy, 24 years old. A third young Egyptian, M. Abozied, is employed by the Marland Co. of California, making his headquarters at Long Beach, Cal. The three were sent to the United States in October, 1923, and all have been graduated from the University of California with degrees in petroleum engineering. Now they are learning the practical side of the refining and producing branches. When they return to Egypt they will enter the government service as refining and producing technologists.



GULF
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General Sales Offices
PITTSBURGH, PA.
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New York, Houston, Atlanta, Boston, New Orleans, Tampa, Philadelphia

REFINERS OF OKLAHOMA
TEXAS AND LOUISIANA

PETROLEUM

REFINED OIL
GASOLINE
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT

Fuel Oil--Lubricating Oils

CYLINDER ENGINE
CORDAGE

RED AND PALE PARAFFINE OILS

New Patents

Production

Swivel Bailer Top.—Frank J. Hinderliter, Tulsa, Okla. Filed Aug. 17, 1925. No. 1,624,948.

Drill Bit.—Ernest U. Keller, Pawhuska, Okla. Filed May 1, 1926. No. 1,625,030.

Tank for Separating Oil and Water from Gas.—Felbert A. Ray, Wichita Falls, Tex. Filed Sept. 5, 1925. No. 1,625,052.

Well-Testing Tool.—Conrad T. Neitzel, Dallas, Tex. Filed Feb. 14, 1927. No. 1,625,140.

Shield for Casing-Slip Handles.—William S. Pine, Ventura, Calif. Filed Mar. 11, 1926. No. 1,625,152.

Rotary Underreamer.—Merlin C. Hazard, Huntington Beach, Calif., assignor to Marvel Oil Tool Co., Huntington Beach, Calif. Filed Oct. 13, 1923. No. 1,625,208.

Oil-Well Pump.—Charles B. Thurston, Oildale, Calif., assignor of one-third to Winfield S. Buchner and one-sixth to Robert B. Thurston, Oildale, Calif. Filed Mar. 10, 1926. No. 1,625,230.

Collapsing Oil Drill.—Benjamin B. Dudley, Visalia, and Edward R. Dudley, Piedmont, Calif. Filed Aug. 24, 1925. No. 1,625,247.

Casing Head for Oil Wells.—Joseph E. Snodgrass, Amarillo, Tex., assignor of one-third to Leon Victor Leinhard, Amarillo, Tex. Filed June 12, 1926. No. 1,625,378.

Tool for Cutting and Removing Pipe from Wells.—John B. Reilly, Whittier, and Charles H. Stone, Brea, Calif., assignors to Kammerer Corp., Santa Fe Springs, Calif. Filed July 19, 1923. No. 1,625,391.

Refining

Liquid Fuel.—Lewis N. Bowman, Chicago, Ill., assignor of one-eighth to H. H. Harrison and one-eighth to A. R. White, Chicago, Ill. Filed July 13, 1925. No. 1,625,236.

Foreign Opportunities

Reserved information may be obtained from the Bureau of Foreign and Domestic Commerce, Washington, and its district and cooperative offices by duly registered firms and individuals upon written request by opportunity number. The Bureau does not furnish credit ratings or assume responsibility as to the standing of foreign inquirers; the usual precautions should be taken in all cases, and where no references are offered it does not necessarily imply that satisfactory references could not be given. Correspondence may be in English unless otherwise stated.

24943.—**Lubricating oils and paraffin,** Glasgow, Scotland, agency.

24786 and 24812.—Mineral oils, Munich, Germany, purchase and agency.

24798.—Candles, Ceiba, Honduras, agency.

24860.—Gasoline and lubricating oils, Geneva, Switzerland, sole agency.

24861.—Motor oils and paraffin, St. Gall, Switzerland, agency.

WICHITA, KANS.—A new steam-jacketed kettle for making its new non-chatter oils, was installed during the past year by the Western Lubricating Co., with headquarters here. New equipment for cleaning drums has also been added. The company manufactures oils for the jobber, according to H. J. Huggins, secretary.

Heavy rains throughout the southwest during the past three weeks, have slowed up business for the country jobber, Mr. Huggins states.

A Leader Grease Rack by the Side of the Road Is a Friend to Man

No foundation necessary; can be set up anywhere in one hour

Competition demands a brand of quick, efficient greasing service that is rapidly putting the pit out of business. The LEADER all-steel Drain and Grease rack meets the demand without an investment in expensive equipment, yet it enables the station owner to render an up-to-date grease service.

The features of LEADER racks are obvious—practicability, economy and efficiency.

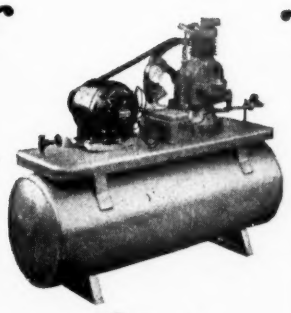
First, no foundation is required and installation is quickly made within one hour (2 men).

Second, the runways are pressed into form by hydraulic pressure. There are no sharp edges and it is practically impossible for a car to run off the rack by climbing the sides.

Third, besides this item of safety, LEADER racks are remarkably low in cost. There is no maintenance expense.

LEADER Drain and Grease Racks are made in two sizes, with 8″ and 10″ rack specifications.

If you are contemplating any changes in your greasing plans, be sure to get complete information on LEADER racks. It will gladly be sent upon your request.



Leader

AIR COMPRESSOR

LEADER Compressors are sold complete, ready to install. The tanks are of LEADER Rivet-Weld construction. The air cooling system has no valves or other intricate complications. They are of the vertical type with suspended crank shaft bearings, laminated shims, balanced lightweight pistons and innumerable other mechanical features essential to dependability, durability and economy.

Write for Complete Descriptive Literature

LEADER IRON WORKS

2112 No. Jasper Street
DECATUR, ILLINOIS

20,000,000 Cars On The Road!

A $60,000,000.00 Wash Market for You!

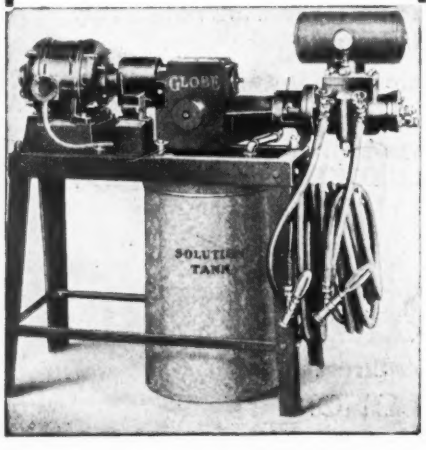
Figures don't lie! If only one-fourth of the automobile owners use car-wash service it leaves 5,000,000 cars. At an average wash price of $2.00, with service only every other month, you have an annual market of $60,000,000.00. Are you losing out on this business? Are you passing it along to the fellow down the street?

The new GLOBE Simplex Hi-Pressure Car Washer is engineered for fast, efficient, and productive service — two operators can use it simultaneously. It is built solely for the job of car-washing—it is not a make-shift.

Write for complete data, descriptive literature, and prices. Start getting your share of wash profits with a "GLOBE". We also manufacture the popular Globe Air Compressors and Air Towers.

GLOBE MANUFACTURING CO.
56-66 Grant St.,
Battle Creek, Mich.

Canadian Sales Agent: Donald Dixon & Co., Canada, 21 King St., East, Toronto, Ont., Canada



Here & There

National Petroleum News

R. E. Leigh, chief clerk of the producing department of the Louisiana Oil Refining Corp., Shreveport, La., has resigned to accept a position with Trinidad Oil Fields Operating Co., Ltd., Trinidad, B. W. I. He sailed from New York on Feb. 26 for Trinidad. Mrs. Leigh and a little daughter, Katherine, sailed on March 19 to join Mr. Leigh.

Mr. Leigh had been with the Louisiana company for seven years and left many friends in the Mid-Continent producing fields. A farewell party was given him on Feb. 19 by office members.

L. R. Saunders, who has been assistant to Mr. Leigh, succeeds the latter as chief clerk of the headquarters' production department.

* * *

C. P. Grassmuck, formerly director of planning and research for the Tide Water Oil Co., New York, is now with Wilson & Co., packers, with headquarters at Chicago.

Mr. Grassmuck had been with the Tide Water company for 15 years during which time he developed a quota and budget system for salesmen which is considered a contribution to scientific management.

* * *

Ralph White, of the Ft. Scott Oil Co., Ft. Scott, Kans., has returned from his semi-annual trip to Florida. While there, Mr. White added another sport besides golf, to his list, that of hound racing, according to Earl Van Buskirk, of the Butler Mfg. Co., Kansas City, Mo.

* * *

Mr. McNab of the Superior Oil Co., Bolivar, Mo., is famous in the Ozark mountain regions for hunting and fishing success. He, with Earl Van Buskirk, salesman of the Butler Mfg. Co., Kansas City, Mo., are planning a trip to test their skill sometime this spring.

* * *

Godfrey L. Cabot, of Godfrey L. Cabot, Inc., Boston, Mass., is on a tour of the west visiting the various carbon black plants in which he is interested in Texas, Montana, Utah; also in West Virginia, Kentucky and Louisiana, according to Thomas D. Cabot, treasurer.

Junior Here and There

Carl Malone, of the Security Oil Co., Ft. Scott, Kans., has just been presented with a baby boy. His brother, Avery, was a recent recipient of twins.

At least two Wichita, Kans. oil men were to be included among that city's representative business men to make the annual trip sponsored by the Wichita Chamber of Commerce in a special train through southwestern Kansas. These oil men are J. B. Bradford, president of the Western Lubricating Co., and C. A. Keller, sales manager of the Derby Oil & Refining Corp., both of Wichita.

* * *

N. E. Bellows, industrial representative at Flint, Mich., for the Sinclair Refining Co., Chicago, who formerly worked city territory in Chicago, has been transferred to north eastern Michigan territory with headquarters at Flint.

* * *

T. E. Knotts, purchasing agent of the Mid-Continent Petroleum Corp. at the St. Louis, Mo. office, spent several days the first part of April in Tulsa on business. On his return he stopped off at Neosho to visit his parents.

* * *

Charles McCarthy, district manager for the Texas Co. at New York, called at the office at 17 Battery place a few days ago for the first time since January when he suffered a serious relapse of pneumonia.

* * *

Thomas Abraham, special representative for The Texas Co., Houston, Tex., who operates from the Dallas office, recently made a trip to the company's Arizona district.

* * *

Jennings Johnson, formerly assistant cashier of the First National Bank, Mesa, Ariz., is now agent at Mesa for the Marine Oil & Refining Co., Los Angeles.

* * *

Louis G. Reitzel, who was formerly agent for the Sinclair Refining Co. at Beaver Falls, Pa., is now manager of retail sales at Coraopolis, Pa. for the Canfield Oil Co., Cleveland, O.

* * *

John P. Jones, of Fairmont, W. Va., was a business visitor in Elkins, W. Va., recently, according to Harry C. Grimes, owner of the Triangle Filling Station at Elkins.

* * *

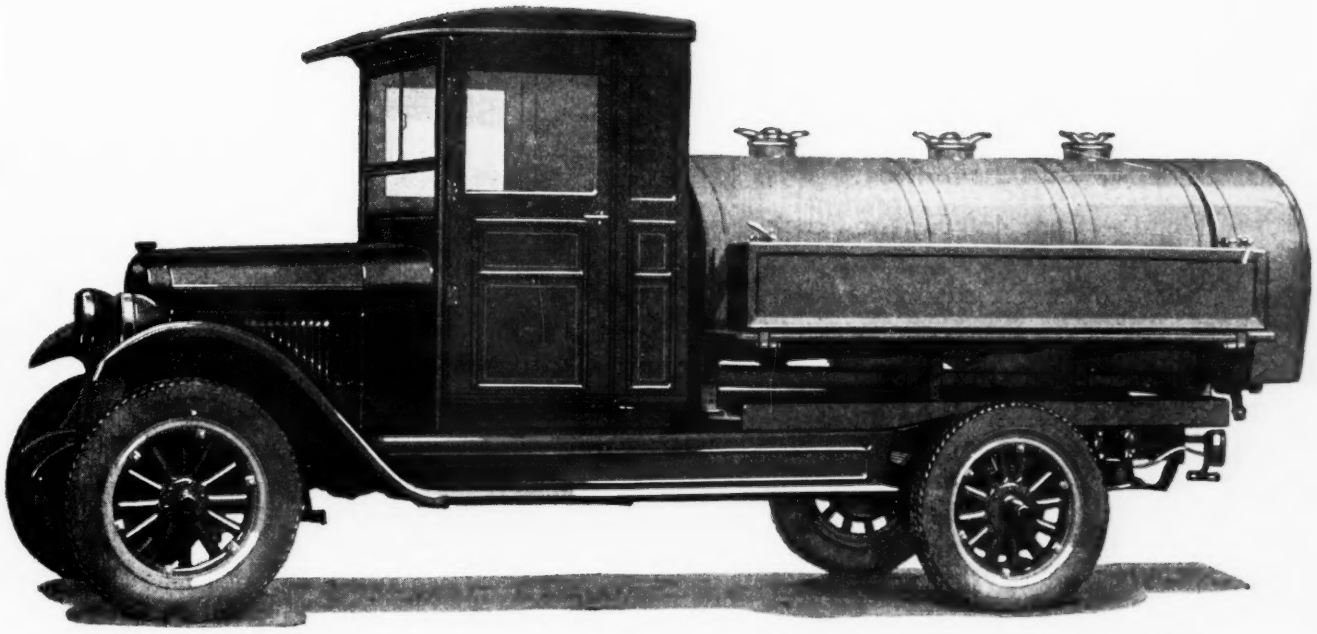
Frank B. Anderson, of Anderson & Anderson, consulting geologists, Wichita, Kans., is on a business trip to New York City to consult with clients.

* * *

T. P. Collins, president of Industrial Petroleum Co., Chicago, is on a vacation at Hot Springs, Ark. He will return to his office late this month.

for Economical Transportation

CHEVROLET



Because of Dependability, Power and Economy—now the World's Most Popular Gear-Shift Truck!

—*at these Low Prices!*

1-Ton Truck with Stake Body	$680
1-Ton Truck with Panel Body	$755
1-Ton Truck Chassis with Cab	$610
1-Ton Truck Chassis	$495
½-Ton Truck Chassis	$395

All prices f. o. b. Flint, Mich.

Check Chevrolet Delivered Prices

They include the lowest handling and financing charges available.

In every section of the country Chevrolet Truck sales are breaking all records—definitely establishing Chevrolet as the world's most popular gear-shift commercial car.

This decisive preference for Chevrolet is based on a matchless combination of dependability, power and economy—plus the public's confidence in a product of General Motors.

Chevrolet's dependability under every condition of usage has long been traditional—while the Chevrolet valve-in-head motor delivers power in excess of the severest requirements.

Extremely low consumption of gasoline and oil, combined with minimum maintenance costs, makes Chevrolet the most economical haulage unit available.

See the nearest Chevrolet dealer—and arrange for a trial load demonstration.

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

THE WORLD'S LARGEST BUILDER OF GEAR-SHIFT TRUCKS

Pennsylvania Oil PLUS

Plus what?—Plus the fact that it is blended from 450 Bright Stock (Sharples Process) refined in ONE Freedom plant—and from 100% Pennsylvania Crude Neutrals refined in ANOTHER Freedom plant.

Thus, under *one* supervision, with the *one* guarantee of a 48-year-old refinery, a 100% Pennsylvania Motor Oil is blended to YOUR specifications — or a complete line of oils can be furnished — an oil or a complete line of oils that enable you to get business and to HOLD it.

Guaranteed 100% PURE PENNSYLVANIA OIL

For forty-eight years, The Freedom Oil Works Company has specialized in the refining and blending of 100% Pennsylvania Oils. In one way, that explains why jobbers the country over come to this concern for their requirements.

Deliveries can be made immediately, in tank cars, compartment tank cars, barrels, or drums. Write for quotations.

Also available for immediate shipment

450 Bright Stock (Sharples Process) which requires less neutral to blend to the ordinarily required specifications.

Freedom Quality Stocks
600 Steam Refined
635 Steam Refined
650 Steam Refined

Freedom 300 Mineral Seal Oil made to Railroad Specifications.

Freedom Filtered Burning Oils.

The Freedom Oil Works Company
Freedom, Penna.
Established 1879
Refineries at Freedom and Coraopolis, Pennsylvania

FREEDOM

New Stations Built or Being Built

Beaver Crossing, Neb.—The farmers of this town are planning to build a service and bulk station here. Farmers at Utica, Neb., also expect to enter the oil business, according to W. B. Obermier, filling station proprietor here.

* * *

St. Paul, Minn.—Two service stations will be erected here, one by White Eagle Oil & Refining Co., Kansas City, Mo. and the other by John Hancock Oil Co.

* * *

Marionville, Mo.—Two filling stations are being built here, one by Stone County Oil Co. and the other by Standard Oil Co. of Indiana.

* * *

Auburn, Ind.—Thacher's Automotive Service Co. is building bulk station here, according to C. B. Thacher, manager.

* * *

Hinton, Okla.—Bourgery & Bashford completing filling station. A station will also be built here by Allen Oil Co.

* * *

Topeka, Kan.—Central States Oil Co. will build filling station here, and plans additional stations in Topeka.

* * *

Louisville, Ky.—Stoll Oil Refining Co. is erecting service station at Third and Avery Streets here.

* * *

Martinsville, Mo.—John Van Houtan will erect service station, handling Sinclair products.

* * *

Plattsburg, Mo.—Mr. and Mrs. Kinzie are building filling station at Smith Corner.

* * *

Camden, Ark.—Filling station will be built here by Edwards-Umsted Motor Co.

* * *

Santa Rosa, Tex.—Sibson Bros. erecting filling station on Santa Rosa road.

* * *

Iowa Park, Tex.—Magnolia Petroleum Co. is building service station.

* * *

Sabetha, Kan.—Filling station is being erected here by Buser Oil Co.

* * *

Kennett, Mo.—Pickard-Wilson Motor Co. to build filling station.

* * *

Holdenville, Okla.—J. J. Pickens is building filling station.

* * *

England, Ark.—Carl Lee & Bros. will build filling station.

* * *

Dighton, Kan.—Home Oil Co. is building filling station.

* * *

Murdo, S. D.—Hugo Boysen will build filling station.

* * *

Claremont, Minn.—Profit Sharing Oil Co., Inc., will build service station here.

Officers are: A. Vavrichek, president; Ed Gruneklee, vice president; C. B. Stevens, secretary; and George L. Osborn, manager.

* * *

Humboldt, Ia.—T. S. Buck building filling station at Bradgate, Ia., and will handle Standard Oil Co. products.

* * *

Fremont, Neb.—Two filling stations will be built here, one by L. G. Windsor and the other by Lewis Oil Co.

* * *

Branson, Colo.—The Keeling Oil Co., with headquarters here, is building bulk station at Mosquero, N. Mex.

* * *

Nixa, Mo.—Two filling stations will be built here, one by Will Daugherty, and one by Leslie Dunham.

* * *

Edmore, N. D.—Filling station will be built here by Kenneth Johnson, of Weaver, N. D.

* * *

Cedar Falls, Ia.—Walter Huyck, Grundy Center, Ia., will build service station here.

* * *

Bowling Green, Mo.—Roxana Petroleum Corp., St. Louis, will build service station here.

* * *

Home, Tex.—C. G. Overby, of Sherman, Tex., will build filling station and garage.

* * *

Mesa, Ariz.—The Texas Co. is building one bulk and six service stations here.

* * *

Cimarron, Kan.—Milo Lutton will erect filling station and tourist camp.

* * *

Green Bay, Wis.—J. E. Quatsoe is completing two filling stations here.

* * *

Freeport, Tex.—Gilmer Dingle building filling station and garage.

* * *

Davenport, Ia.—Theodore G. Goodwin will build filling station.

* * *

Grinnell, Ia.—Mr. Pyng, of Muscatine, Ia., is building filling station.

* * *

Lepanto, Ark.—E. W. Hall is erecting filling station and garage.

* * *

Mt. Pleasant, Ia.—Sunshine Oil Co. completing filling station.

* * *

McCook, Neb.—Continental Oil Co. will build filling station.

* * *

Newark, O.—Pure Oil Co. purchased site for filling station.

* * *

Ft. Madison, Ia.—E. J. Malloy will build service station.

* * *

Fairplay, Mo.—J. O. Hammons to build filling station.

* * *

Buffalo, Okla.—George Oil Co. is building service station.

* * *

Cameron, Mo.—Lon Close will erect service station.

Don't buy a Rotary Pump!

Until you have seen our Catalog of CURTIS ROTARY PUMPS

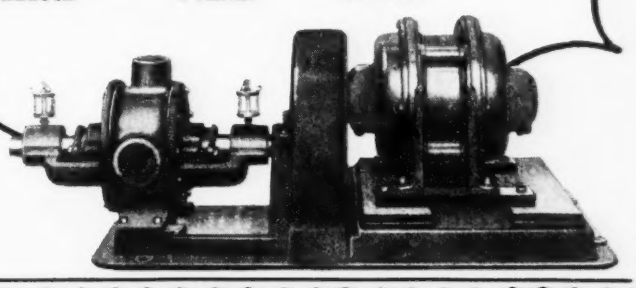
The Pumps equipped with Timken Roller Bearings

You'll find in this Catalog a Curtis Rotary for Every Pumping Purpose. The one shown below was designed for the express purpose of rumping Gasoline and Oils—at the smallest possible cost—with no trouble or delays.

We've been building them for 18 years!

Pittsburgh Machine Tool Co.

Braddock Penna. U. S. A.



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If you want to be convinced of the superiority of Allison Coupon Books, let us put you in touch with those who use them year after year. Absolute accuracy guaranteed.

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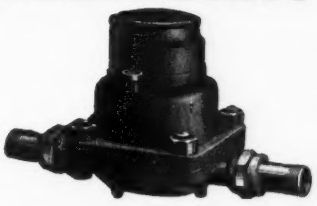
RELIABILITY COMES FIRST



Year after year, users of Niagara Oil or Gasoline Meters depend on them for reliable measurement of petroleum products in any quantity. Their accuracy is constant---the meters are simple and trouble proof---installation is easy. Write us for catalog.

NIAGARA OIL METERS

Built Since 1892 By

BUFFALO METER COMPANY

2889 Main Street :-: :-: Buffalo, N. Y.

NATURAL GASOLINE

FLEXIBILITY

Flexibitity of motor performance depends upon the even burning, non-detonating qualities of the fuel.

To be even burning a motor fuel must be volatile, properly balanced as to boiling points, quickly responsive to throttle changes.

Refiners are using steadily increasing quantities of

NATURAL GASOLINE

in their blends with refined gasoline to increase volatility, giving to the finished fuel the qualities necessary to secure maximum motor performance.

Refiners find in the bulletins issued by the Research Department, Association of Natural Gasoline Manufacturers, Cosden Building, Tulsa, Okla., much useful information regarding motor fuels. Write for these bulletins.

ASSOCIATION OF NATURAL GASOLINE MANUFACTURERS

RESEARCH DEPARTMENT ASSOCIATION OF NATURAL GASOLINE MANUFACTURERS

ON THE LAZY BENCH

National Petroleum News

Don't Forget the Money You Save Shaving Yourself

I have just finished reading the morning paper and it has acted like a tonic. I am a new man—my outlook on life is a happy one.

On one page I see where I can become a great singer by using a certain brand of cigarettes. They're so easy on one's throat!

I can cure any disease without the knife, so I will never fear cancer again.

By putting this carburetor on my car I can save sixty per cent of my motor fuel bill and by using that gasoline I save another sixty. It's very easy—just drive in a service station once a day and have the surplus bailed out.

I can marry by mail. "Widow wants to meet congenial young man. Object: Matrimony." It's great!—two can live just as cheaply as one—if one doesn't eat.

Health and happiness will be mine forever if I can only pay one dollar down on this vacuum cleaner. It pays for itself in sixty days.

Art lovers can purchase ten of these risque post cards at a reduced price and save from ten to fifteen per cent.

"I will not be responsible for my wife's debts after this date."—Another man making money.

"Cuthbert: Please come back; mother-in-law gone back home."—Another man making money.

And so it goes until at the last page I am automatically rich. I rush to my bank book and expect to find deposit after deposit from these money saving things. I find the same three dollars that I deposited a month ago.

So I come to the conclusion that there isn't much of a wrong committed when our national bums say that the world owes them a living.

—Skelly News

◈ ◈ ◈

Latest Scotch Story

Sandy MacPherson, after being shown to his room in a hotel, looked from the window and noticed a large illuminated clock in a tower across the street. He stopped his watch.

—The Pure Oil News

◈ ◈ ◈

"Ah's gwine to go to de pahty t'night, but fust Ah's gotta go home an' change mah clothes."

"Change yo' clothes? Boy, when yo' buttons yo' coat, yo' trunk am locked!"

—The Pure Oil News

◈ ◈ ◈

Manager: "Late again! Have you ever done anything on time?"

Clerk: "I bought a car."

Ode to the Horse

O horse, you are a wonderful thing—no buttons to push, no horns to honk, you start yourself, no clutch to slip, no gears to strip, no license buying every year with plates to screw on front and rear; no gas bills climbing up each day, stealing joy of life away; no speed cops chugging in your rear, yelling summons in your ear. Your inner tubes are all O. K., and, thank the Lord, they stay that way. Your spark plugs never miss and fuss; your motor never makes us cuss. Your frame is good for many a mile; your body never changes style; your wants are few and easy met—you've something on the auto yet.—Selected.

—The Pure Oil News

◈ ◈ ◈

Where the Nickels Go

Scene—Sunday morning in a drug store:

"Can you give me change for a dime, please?"

Druggist—"Certainly, and I hope you enjoy the sermon."

—Iowa Independent Topics

◈ ◈ ◈

Definitions to Remember

Competitor—The man who thinks you are as bad as you think he is.

Dividends—A certain per centum per annum.—Perhaps.

Financial Statement—Shows what you would be earning if you were.

—Bridgeport Driller

◈ ◈ ◈

Two Bad

A Yankee strolled into a city teashop, took his seat and waited. Presently a bright-eyed waitress approached him, and asked:

"Can I take your order?"

"Yes; two boiled eggs and a kind word."

The waitress brought the eggs and was moving on, when the Yankee said, "Say! What about the kind word?"

The waitress leaned over and whispered, "Don't eat the eggs."

—The Pure Oil News

◈ ◈ ◈

Fatal Victory

Lady—(to little boy)—"What are you crying for, sonny?"

Little Boy—"My brother and I were having a race to see who could lean out of the window farthest and he won."

—Iowa Independent Topics

◈ ◈ ◈

Hi—"So Jack is against Prohibition?"

Lo—"Against Prohibition? Why he's so wet that every time you blow on him he ripples."

—Union Oil Bulletin

Heavy Duty Folio

Your Name in Gold FREE

Completely Equipped

$17.35

367—The best constructed folio we have developed. Made from the best 6-oz. smooth black cowhide. Comfortable handles made to carry all the weight, relieving the strain on the seams. Reinforced bottom protected with studs. Three pockets. Two inner cases may be carried.

Less 10% for Cash

Other styles in our FREE Catalog

L-U-C-E

Builders of Sales Luggage

614 Delaware, KANSAS CITY, MO.

Banishes Fire Hazard from Cleaning!

FIRE hazard in cleaning is eliminated — even to the last remote possibility—by the use of OAKITE cleaning materials and methods.

OAKITE materials cannot ignite. Neither will they burn or explode. Either in solution for cleaning, or in the normal state in which they are shipped and stored.

Make all of your cleaning *safe*, with OAKITE methods. Write for booklet, or ask to have one of our service men call. No obligation.

Oakite Service Men, cleaning specialists, are located in the leading industrial centers of the U. S. and Canada.

Oakite is manufactured only by

OAKITE PRODUCTS, INC.
42c Thames St., New York, N. Y.

(Formerly Oakley Chemical Co.)

OAKITE

Industrial Cleaning Materials and Methods

This Sign brings the motorist in!

and the Sinclair method of recommending Opaline brings him back!

Authorized Dealer

SINCLAIR OPALINE MOTOR OIL

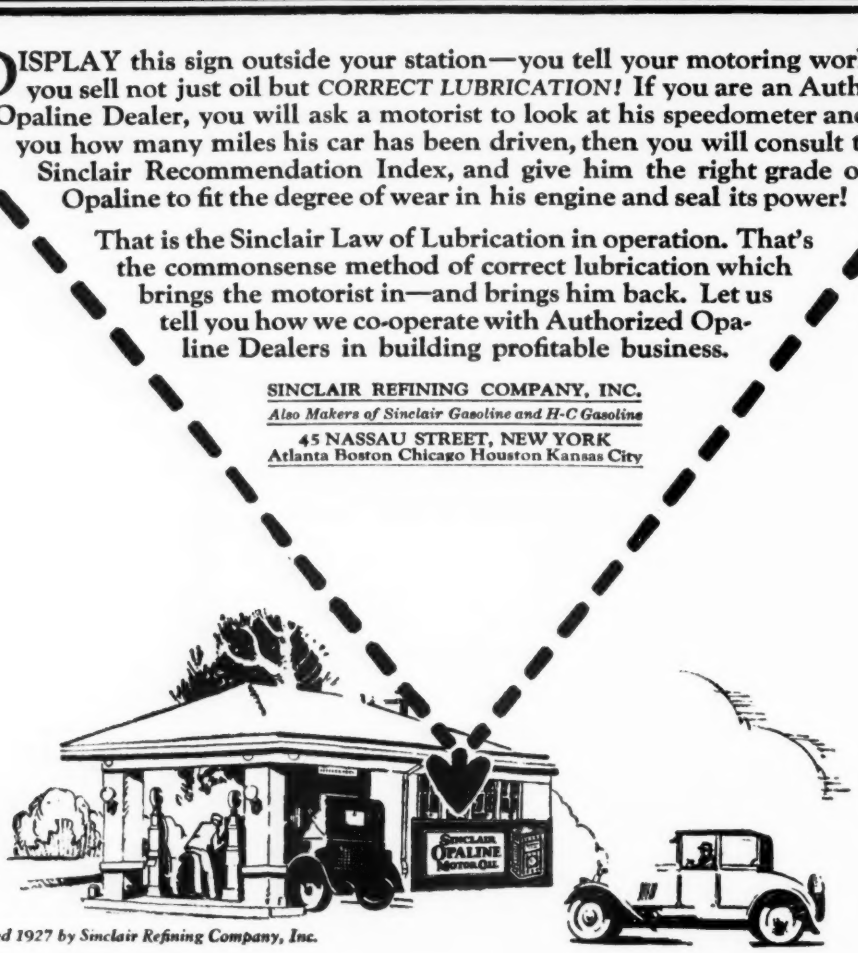
REG. U. S. PAT. OFF.

Seals Power at every Degree of Wear

DISPLAY this sign outside your station—you tell your motoring world that you sell not just oil but *CORRECT LUBRICATION!* If you are an Authorized Opaline Dealer, you will ask a motorist to look at his speedometer and tell you how many miles his car has been driven, then you will consult the Sinclair Recommendation Index, and give him the right grade of Opaline to fit the degree of wear in his engine and seal its power!

That is the Sinclair Law of Lubrication in operation. That's the commonsense method of correct lubrication which brings the motorist in—and brings him back. Let us tell you how we co-operate with Authorized Opaline Dealers in building profitable business.

SINCLAIR REFINING COMPANY, INC.
Also Makers of Sinclair Gasoline and H-C Gasoline
45 NASSAU STREET, NEW YORK
Atlanta Boston Chicago Houston Kansas City



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Refinery - Tank Wagon Markets

National Petroleum News

Improvement Noted in Mid-Continent Gasoline Demand and Prices

TULSA, April 30

FAIR spot gasoline sales with considerable trading in heavy oils for future shipment, placed Mid-Continent refinery markets in much better shape this week, and dispelled some of the gloom which has hovered over the refinery price situation for some time.

All in all the bullish and bearish factors about balanced. On the bull side there was an indication of the return of real spring weather in the middle west, and evidence of the fact that automobiles have taken to the road again is seen in the large volume of gasoline sales by Mid-Continent refiners. According to reports to NATIONAL PETROLEUM NEWS, Oklahoma and Kansas refiners alone sold around 1000 cars of gasoline this week. This quantity includes gasoline moved on the spot market only, that is for shipment within 10 days or two weeks. Continued good movement on contracts was also reported.

The statement was made a month or so ago by the executive head of a large jobbers' association that purchases of motor gasoline for storage at around 6 to 6.50 cents a gallon would be a good investment was repeated this week, and this doubtless had something to do with the buying frame of mind that jobbers displayed.

A fact that many sources looked upon with favor, was that most of the gasoline bought in March for April shipment probably would figure no longer in the picture after today. It is true that several resale agents covered on their May requirements when they made their April gasoline purchases, but it was generally believed that buying this week for deferred shipment was much less than it was the last week in March.

On the other hand, speculation ran high that major purchases of crude oil would revise their posted prices, bringing them down to the level of those posted by the Magnolia Petroleum Co. It was a generally known fact that officials of two of the major crude purchasing companies were in conference this week, and it was everybody's guess that the main topic of discussion would be crude. Production in the Seminole area reached a new peak when 347,268 barrels of oil were brought to the surface in the 24 hours ended at 7 a. m. April 28. No reductions in posted prices for crude, however, had been made to close of business April 30.

The market for 58-60 U. S. Motor gasoline opened Monday with Oklahoma refiners selling generally at 6.25 to 6.50 cents a gallon. No sale of this grade at less than 6.25 cents to the jobbers was reported. Marketers were able to buy occasional small lots at 6.125 cents but in no way were they considered representative of the general going market. One marketer also bought 125 cars of 58-60, 437 end point gasoline, which did not meet doctor and corrosion tests, over the first five days of this week at 6 cents a gallon. He stated he was unable to do this price on gasoline of full U. S. Motor specifications.

The heavier grades of motor fuel were in slightly better demand as the week advanced. A few sales of the 56-58, 450 end point and 58-60, 450 end point grades were reported, and it is to be expected that demand for these heavier gasolines will continue to increase with the approach of warmer weather, although at present the buyer must pay virtually the same prices for these grades as for U. S. Motor. The 58-60 U. S. Motor grade closed today at the same range that had held over the week although sales at 6.25 cents were fewer.

Demand for high gravity gasolines continued light in both Oklahoma and north Texas. Refiners who have been cutting high tests, are shipping on the export orders received last week, and are not making 58-60 U. S. Motor at present. Other refiners in north Texas who are cutting 58-69 U. S. Motor, are making just enough to take care of the requirements of their own stations and are offering little, if any, on the spot market. The few cars of 58-60 U. S. Motor gasoline that sold out of north Texas brought 6.25 to 6.375 cents.

According to reports received in Tulsa, the Mississippi river flood has greatly impeded shipments from Arkansas and Louisiana refineries. Early in the week one refiner reported being 40 cars behind on gasoline shipments. Others were in much the same condition, and still others had cars loaded ready to move out as soon as possible. Railroads were refusing to issue bills of lading. Because of this a few refiners advanced their prices 0.25 cents for new gasoline business. Not until late in the week, however, were sales reported at the higher prices. Reports today indicated traffic conditions was gradually being relieved and movement would doubtless be normal in the next few days.

Natural gasolines have been fairly active. A large number of small lots were reported sold every day, and one or two large orders also were placed. An order for 100 cars of grades BB and C was placed Wednesday for shipment over May at prices slightly higher than those of the current market. Grade AA sold over the week at 4.50 to 4.75 cents, grades BB at 4.125 to 4.25 cents and grade C at 4 cents. As the week ended, no material was available at the lower prices in the ranges quoted. Grades A and B were in less demand this week on account of warmer weather and these commodities were bringing no more than was obtainable for AA and BB.

The market for kerosene which was generally unchanged over most of the week, staged a slight comeback Friday. Water white 41-43, which sold in small lots at 4 cents a gallon in Oklahoma, was unobtainable under 4.125 cents. A north Texas refiner sold approximately 50 cars of this grade at 3.75 cents early in the week. His price was then advanced to 3.875 cents, and he stated he had turned down orders for 25 or 30 cars at this figure. His May production is now sold up.

Gas oil likewise on Friday and Saturday was held at prices an eighth of a cent higher than the general market earlier in the week. Refiners who had any quantity of material to sell took current prices for their material and then advanced their quotations. Others refused to sell at the low prices prevailing and ran their production to storage. An Oklahoma refiner reported sale of 30,000 barrels of gas oil (1,260,000 gallons) to a Chicago marketer at 2.375 cents a gallon, shipment to be completed by July 1. Gas oil of 32-36 gravity for

(Continued on page 117)

Immediate Profits • • Permanently Sustained

A good rule for any jobber who seeks to increase his motor oil profits and at the same time establish his motor oil business on a permanent and profitable basis is—

Sell only a Motor Oil of uniform quality and established reputation.

Sell a brand of oil that offers a constant, dependable source of supply.

Sell a brand of oil that assures a satisfactory margin of profit.

Sell a brand of oil that carries with it the active sales co-operation of its manufacturer.

To sum up • • • SELL SHELL • • • Write for particulars.

Roxana Petroleum Corporation

Shell building • • • **Shell Corner** ***• • • St. Louis***

Branch Sales Offices: Chicago, Illinois, 624 South Michigan Avenue • • • Kansas City, Missouri, Federal Reserve Bank Building • • • Tulsa, Oklahoma, Mayo Building • • • Indianapolis, Indiana, Meyer-Kiser Bank Building Cleveland, Ohio, • • • Guarantee Title Building

Refineries: Wood River, Illinois
Arkansas City, Kansas

Address all communications to St. Louis Office

SHELL
MOTOR OIL

QUALITY AND A GOOD NAME

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery, except where $ sign is shown

GASOLINE AND NAPHTHA

PENNSYLVANIA	Prices May 2	Prices Apr. 25	Prices Apr. 18
52-54 Naphtha	9.00 - 9.50	9.00 -10.00	9.00 -10.00
54-56 Naphtha	9.25 - 9.75	9.25 -10.00	9.25 -10.00
58-60 Gasoline	9.00 - 9.25	8.75 - 9.25	9.00 - 9.50
60-62 Str.-run gasoline	9.50 -10.50	9.50 -11.00	9.75 -10.50
64-66 Str.-run gasoline	9.75 -11.00	10.00 -11.00	10.50 -11.50
68-70 Str.-run gas. 350-360 E.P.	10.50 -11.50	10.50 -11.50	11.00 -11.50
68-70 Str.-run gas. 305-320 E.P.	18.00 -18.25	15.50 -18.00	17.50 -18.50
OKLAHOMA			
48-50 450 E. P. naphtha	6 - 6.25	6.00 - 6.25	- 6.25
50-52 450 E. P. naphtha	6 - 6.25	6.00 - 6.25	- 6.25
56-58 450 E. P. gasoline	6 - 6.25	-†6.00	†- 6.00
56-58 U.S. Motor 437 E.P.	††- 6.25	- 6.25	†6.00 - 6.125
58-60 450 E. P. gasoline	-†6.25	-†6.00	†- 6.00
58-60 U. S. Motor 437 E. P.	6.25 - 6.50	6.25 - 6.50	6.25 - 6.50
60-62 437 E. P. gasoline	-*6.50	- 6.50	- 6.50
60-62 400 E. P. gasoline	- 6.75	6.50 - 6.75	6.50 - 6.75
64-66 390 E. P. gasoline	- 7.00	6.875- 7.00	6.875- 7.00
64-66 375 E. P. gasoline	7.00 - 7.25	7.00 - 7.125	7.00 - 7.125
68-70 350-360 E. P. gas	7.50 - 7.75	7.625- 7.75	7.625- 7.75

†Prices Nominal. ††Only one refiner quoting. *Quotation only.

KANSAS*			
58-60 U.S.Motor 437 E. P.	6.75 - 7.00	6.75 - 7.00	- 7.00
60-62 400 E.P.gasoline	7.00 - 7.25	- 7.25	- 7.25
64-66 375 E. P. gasoline	7.50 - 7.75	- 7.75	- 7.75

*F. O. B. refinery Kansas destination.

NORTH TEXAS			
48-52 450 E. P. naphtha	-†6.00	-†6.00	†6.00 - 6.25
56-58 450 E. P. gasoline	-†6.00	-†6.00	-†6.00
58-60 450 E. P. gasoline	- 6.00	- 6.00	-†6.00
56-58 U. S. Motor 437 e. p.	††- 6.125	††- 6.125	-†6.00
58-60 U. S. Motor 437 e. p.	6.25 - 6.375	6.25 - 6.375	6.25 - 6.375
64-66 390 E. P. gasoline	-*6.75	*- 6.75	-*6.75
64-66 375 E. P. gasoline	*6.875 - 7.00	*- 7.00	-*7.00
68-70 350-360 E. P. gasoline	*7.25- 7.50	*- 7.50	-*7.50

†Prices nominal. ††Only one refiner quoting. *Quotations only.

NORTH LOUISIANA			
58-60 U. S. Motor 437 E. P.	- 6.50	6.25 - 6.50	6.375- 6.50
ARKANSAS			
56-58 450 E. P. gasoline	- 6.25	- 6.25	- 6.25
58-60 450 E. P. gasoline	- 6.25	- 6.25	- 6.50
58-60 U. S. Motor 437 E. P.	- 6.75	6.50 - 6.625	- 6.75
CALIFORNIA			
*54-58 U. S. Motor 437 E.P.	5.50 - 6.00	5.50 - 6.00	6.50 - 7.50
*58-60 U. S. Motor 437 E.P.	6.50 - 7.50	6.50 - 7.50	7.25 - 8.00
*42-45 Eng. dis. 445-480 E.P	5.00 - 5.50	5.00 - 5.50	5.00 - 5.50

*2c tax to be added if used in state.

NEW ENGLAND (F. O. B. Boston and Fall River)			
58-60 U. S. Motor gas	-10.25	-10.25	-10.25

NATURAL GASOLINE

(Note: End point of all grades, not over 375°F.)

OKLAHOMA			
Grade AA,80-87.9,90% Rec	4.625- 4.75	- 4.50	- 4.50
Grade A,72-79.9,90% Rec.	4.625- 4.75	†4.625- 4.75	- 4.75
Grade BB,84-92,85% Rec.	- 4.25	4.125- 4.25	- 4.25
Grade B,76-83.9,85% Rec.	- 4.25	- 4.25	- 4.25
Grade C,80-90,78% Rec	- 4.00	- 4.00	- 4.00

†Prices Nominal.

NORTH LOUISIANA			
*Grade AA	4.75 - 5.00	- 4.75	4.75 - 5.00
*Grade BB	- 4.50	- 4.50	4.50 - 4.75
*Grade C	- 4.25	- 4.25	4.25 - 4.50

*F. O. B. Monroe District.

NORTH TEXAS			
*Grade AA,80-87.9,90% Rec	4.625- 4.75	- 4.50	- 4.50
*Grade A,72-79.9,90% Rec.	4.625- 4.75	†4.625- 4.75	- 4.75
*Grade BB,84-92,85% Rec.	- 4.25	4.125- 4.25	- 4.25
*Grade B,76-83.9,85% Rec.	- 4.25	-†4.25	-†4.25
*Grade C,80-90,78% Rec.	4.00 - 4.125	-†4.00	†4.00 - 4.125

*F. O. B. Breckenridge.
†Prices nominal, no sales being recorded on this date.

CALIFORNIA			
75-85, 375-390 E. P. blend	5.50 - 7.00	5.50 - 7.00	6.00 - 7.00

MOTOR FUEL BLENDS

PENNSYLVANIA			
68-70 Blend 437 E.P.	9.00 - 9.50	9.00 -10.00	-10.50
64-66 Blend 437 E.P.	9.00 - 9.50	9.00 -10.00	9.25 -10.25
60-62 Blend 437 E.P.	9.00 - 9.50	9.00 -10.00	9.25 -10.00
OKLAHOMA			
64-66 Blend 437 E.P.	6.00 - 6.125	- 6.125	- 6.125

BURNING OILS

PENNSYLVANIA			
45 w. w. kerosene	6.75 - 7.00	6.875- 7.25	- 7.00
46 w. w. kerosene	7.25 - 7.50	7.375- 7.50	7.375- 7.50
47 w. w. kerosene	7.75 - 8.25	7.75 - 8.00	7.75 - 8.00
OKLAHOMA			
41-43 w. w. kerosene	4.125- 4.25	4.125- 4.375	4.25 - 4.50
42-44 w. w. kerosene	- 4.50	4.50 - 4.75	4.625- 4.875
KANSAS			
41-43 w. w. kerosene	5.00 - 5.50	5.00 - 5.50	5.25 - 5.50
42-44 w. w. kerosene	5.25 - 5.75	- 5.75	- 5.75
NORTH TEXAS			
40-42 w. w. kerosene	- 3.75	- 3.75	3.75 - 4.00
41-43 w. w. kerosene	3.875- 4.00	3.75 - 4.00	- 4.00

†Prices nominal.

NORTH LOUISIANA			
41-43 w. w. kerosene	4.50 - 4.75	4.50 - 4.75	4.50 - 5.00
ARKANSAS			
41-43 w. w. kerosene	4.75 - 5.00	4.75 - 5.00	- 5.25
CALIFORNIA			
38-40 w. w. kerosene	5.50 - 6.00	5.50 - 6.00	6.00 - 6.50
NEW ENGLAND			
**40-43 w. w. kerosene	- 7.50	- 7.50	- 7.50

**Only one refiner quoting.

NEUTRAL OIL

PENNSYLVANIA (Viscosity at 70° F.) Vis.			
200 No. 3 Assoc. Filt	†33.50 -35.00	†33.00 -34.00	33.00 -34.00
180 No. 3 Assoc. Filt	†30.50 -31.00	†30.50 -31.00	30.50 -31.00
150 No. 3 Assoc. Filt	-28.00	†28.00 -28.25	28.00 -28.25
(Non-Viscous)			
34 Grav. 330-340 Flash	7.25 - 8.00	7.50 - 8.00	7.50 - 8.00
36 Min. Neut. 300-305 Flash	6.50 - 7.50	6.50 - 7.50	6.50 - 7.50

†Prices Nominal.

OKLAHOMA (Viscosity at 100° F.) Vis. Color			
100—No. 2	5.75 - 6.50	6.00 - 6.50	6.00 - 6.50
150—No. 3	- 8.50	- 8.50	- 8.50
150—No. 4	8.00 - 8.25	8.00 - 8.25	8.00 - 8.25
180—No. 3	9.50 -10.50	9.50 -10.50	9.50 -10.50
180—No. 4	- 9.75	- 9.75	- 9.75
180—No. 5	9.25 - 9.75	9.25 - 9.50	9.25 - 9.50
200—No. 3	10.00 -11.00	10.50 -11.00	10.50 -11.00
200—No. 4	10.50 -10.75	10.50 -10.75	10.50 -10.75
200—No. 5	9.00 -10.50	9.00 -10.50	9.00 -10.50
220—No. 3	12.50 -13.50	12.50 -13.50	12.50 -13.50
220—No. 4	12.25 -12.50	12.25 -12.50	12.25 -12.50
220—No. 5	11.50 -12.00	11.50 -12.00	11.50 -12.00
240—No. 3	14.00 -14.50	14.00 -14.50	14.00 -14.50
240—No. 4	-13.50	-13.50	-13.50
240—No. 5	12.00 -13.00	12.00 -13.00	12.00 -13.00
280—No. 3	16.00 -17.00	16.00 -17.00	16.00 -17.00
280—No. 4	-15.25	-15.25	-15.25
280—No. 5	14.50 -15.00	14.50 -15.00	14.50 -15.00
300—No. 5-6	-17.00	-17.00	-17.00

GULF COASTAL (Viscosity at 100° F; pour test 0) Vis. Color			
100—No. 2 Unfilt. Pale	7.50 - 8.50	7.50 - 8.50	7.50 - 8.50
200—No. 3 Unfilt. Pale	10.50 -11.50	10.50 -11.50	10.50 -11.50
300—No. 3 Unfilt. Pale	11.50 -12.50	11.50 -12.50	11.50 -12.50
500—No. 3½ Unfilt. Pale	13.50 -14.50	13.50 -14.50	13.50 -14.50
750—No. 4 Unfilt. Pale	16.00 -16.50	16.00 -16.50	16.00 -16.50
200—No. 5½ Red Oil	8.50 - 9.50	8.50 - 9.50	8.50 - 9.50
300—No. 5½ Red Oil	10.00 -11.00	10.00 -11.00	10.00 -11.00
500—No. 6 Red Oil	11.50 -12.50	11.50 -12.50	11.50 -12.50
750—No. 6 Red Oil	14.50 -15.50	14.50 -15.50	14.50 -15.50

CALIFORNIA (Viscosity at 100° F.) Vis. Color			
100—No. 2	9.00 - 9.50	9.00 - 9.50	9.00 - 9.50
100—No. 3	7.50 - 8.00	7.50 - 8.00	7.50 - 8.00
200—No. 3	9.50 -10.00	9.50 -10.00	9.50 -10.00
300—No. 3	10.50 -11.00	10.50 -11.00	10.50 -11.00
450—No. 3-3½	13.00 -13.50	13.00 -13.50	13.00 -13.50
550—No. 3-3½	14.50 -15.00	14.50 -15.00	14.50 -15.00
600—No. 3-3½	15.00 -15.50	15.00 -15.50	15.00 -15.50
100—No. 5	- 6.50	- 6.50	- 6.50
200—No. 5	8.00 - 8.50	8.00 - 8.50	8.00 - 8.50
300—No. 5	9.00 - 9.50	9.00 - 9.50	9.00 - 9.50
400—No. 5	11.00 -11.50	11.00 -11.50	11.00 -11.50
500—No. 5	11.00 -11.50	11.00 -11.50	11.00 -11.50
600—No. 5	12.00 -12.50	12.00 -12.50	12.00 -12.50
700—No. 7	14.00 -14.50	14.00 -14.50	14.00 -14.50

CYLINDER STOCKS

OKLAHOMA			
190-200 Vis.at210°Brt.St.	30.00 -32.00	30.00 -32.00	30.00 -32.00
150-160Vis.at210°Brt.St.	26.00 -28.00	26.00 -28.00	26.00 -28.00
600E.St.140-150Vis.—210°.	-18.00	-18.00	-18.00
600St.Ref.OliveGreen	9.00 -10.00	9.00 -10.00	8.00 -10.00
600St.Ref.DarkGreen	6.00 - 7.00	6.00 - 7.00	5.00 - 6.00
BlackOil	4.75 - 5.00	4.75 - 5.00	4.00 - 5.00

PENNSYLVANIA (1-inch Immersion Test)			
600 Steam Refined	9.50 -11.00	10.00 -11.00	10.00 -10.75
650 Steam Refined	13.00 -14.50	12.50 -14.50	13.50 -14.00
600 Flash	18.00 -18.50	18.00 -19.00	18.00 -19.00
625 Flash	28.00 -29.00	28.00 -29.00	28.00 -29.00
600 Warren E.	19.50 -20.50	19.50 -20.00	19.50 -20.00
600 Oil City E.	18.00 -19.00	18.00 -18.50	18.25 -18.50
600 D Filtered	25.50 -26.00	25.50 -26.00	25.50 -26.00
ColdTestStocks (brt. filt)	33.50 -35.00	34.00 -35.00	34.00 -35.00
Cold Test Stock (dark filt)	31.00 -32.50	31.00 -33.00	31.00 -33.00

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher.)

LONG RESIDUUM STOCKS

PENNSYLVANIA			
60-65 vis. @ 210, 440-450 flash No. 5½ color	33.00 -34.00	33.00 -34.00	33.00 -34.00
70-75 vis. @ 210, 450-455 flash No. 6 color	34.00 -35.00	34.00 -35.00	34.00 -35.00
80-85 vis. @ 210, 440-450 flash No. 7 color	35.00 -36.00	35.00 -36.00	35.00 -36.00
80-85 vis. @ 210, 450-460 flash No. 7-8 color	36.00 -37.00	36.00 -37.00	36.00 -37.00
80-85 vis. @ 210, 460-465 flash No. 7 color	37.00 -38.00	37.00 -38.00	37.00 -38.00
95-100 vis. @ 210, 490-495 flash No. 8 color	-39.00	-39.00	-39.00

Tank Fittings

Order Them From Headquarters!

IN the oil trade, the Des Moines Foundry and Machine Company is recognized as headquarters for tank fittings.

Among our customers are tank manufacturers, oil refiners, jobbers, and station operators, including nearly all the large oil companies. They come to us because they have found Des Moines Tank Fittings low in price, and lowest in cost per year.

Every item in the Des Moines line is carefully designed and accurately made. Large stocks enable us to assure you of same-day shipping service on your order, from our factory or our nearest warehouse.

Whenever you need fittings, write, wire or phone us for quotations on the quantities you require.

We specialize in foundry work for the oil industry. Get our quotations on any castings in aluminum, brass, bronze or gray iron.

Low-type Vent

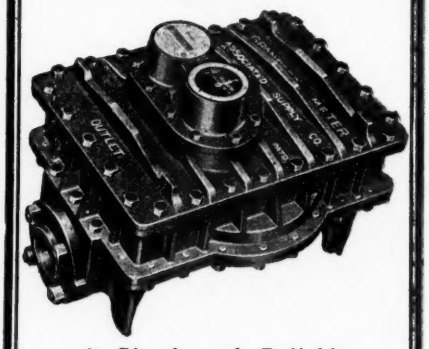
A special Des Moines design, duplex air-vent. Air openings are screened for protection.

Our complete line also includes vented fill caps, flush floor caps, air vents, and reducing bushings. Have your engineering department write for test samples.

DES MOINES FOUNDRY & MACHINE CO.

S. W. 17th & Wabash — Des Moines, Iowa, U. S. A.

The Granberg Petroleum Meter



A *Simple* and *Reliable* Instrument

THE GRANBERG METER

is designed particularly for use on Tank Wagons and Loading Racks and for general service in distributing plants.

This meter will handle all refined petroleum products and will insure accurate records of receipts and deliveries.

It is particularly adapted to installations operating on low gravity heads.

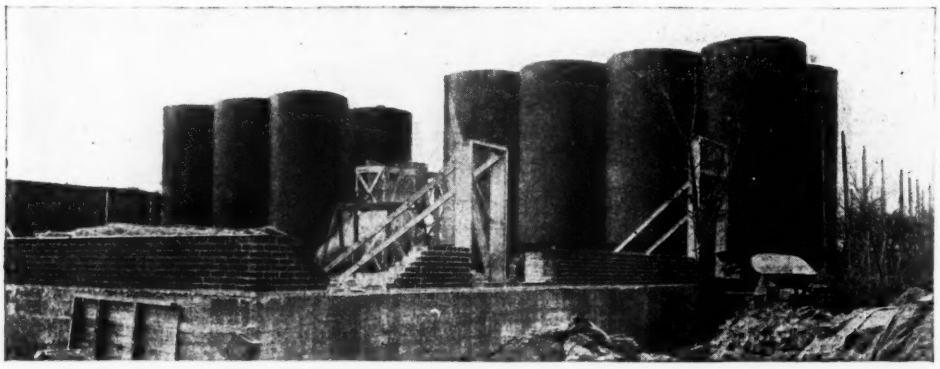
Catalog upon Request.

Associated Supply Company

METER DEPARTMENT
79 New Montgomery St., San Francisco, Calif.

BULK LUBRICATING OIL EQUIPMENT

Heated tanks, pumps, manifolds, compounding kettles



Complete service for refiners or jobbers. Guarantee thickness material. Double Electric welded and oil tight. Let us help you solve your problem in handling lubricating oil, fuel oil, distillate, gasoline, and etc.

BROWN SHEET IRON & STEEL CO.

964 Berry Ave. — St. Paul, Minn.

DON'T DELAY—SIGN THE COUPON AND LET US KNOW WHAT YOU WILL NEED.

Check Items on which you want prices.

Complete Bulk Station____ Number of Tanks____ Size____
Filling Station Tanks____ Size____ Pumps____
Truck Tanks____ Size____ Compts____
Other Equipment____
Name____ Address____

Refinery Markets on Wax and Heavy Oil Products

Prices given below are in cents per gallon, F. O. B. refinery, except where $ sign is shown

WAX

*PENNSYLVANIA	Prices May 2	Prices Apr. 25	Prices Apr. 18
122-124 White Crude Scale.	– 3.00	3.25 – 3.50	3.375– 3.50
124-126 White Crude Scale.	3.00 – 3.25	3.25 – 3.50	– 3.50
OKLAHOMA			
124-126 White Crude Scale.	– 2.75	2.75 – 2.90	2.75 – 3.00
†Represents quotations only.			
CALIFORNIA			
White Crude Scale.....	6.00 – 7.00	6.00 – 7.00	6.00 – 7.00
*Per Pound, New York			

FUEL OIL

PENNSYLVANIA			
36-40 Fuel Oil.....	5.25 – 5.50	– 5.50	5.375– 5.75
30-34 Fuel Oil.....	5.25 – 5.50	5.25 – 5.50	5.50 – 5.75
28-30 Fuel Oil.....	5.125– 5.50	5.125– 5.50	5.50 – 5.75
OKLAHOMA			
38-40 Straw distillate...	3.125–3.25	3.125– 3.25	3.125– 3.25
36-38 Straw distillate...	–3.00	– 3.00	– 3.00
32-36 Gas oil cracked....	–2.625	2.50 – 2.625	2.50 – 2.625
32-36 str. reduced Gas oil	2.625–2.75	2.625– 2.75	2.625– 2.875
28-30 Fuel oil (Bbl.).....	$.95 – .975	$1.00 – 1.05	†–$1.15
26-28 Fuel oil (Bbl.).....	– .95	–$1.00	†–$1.10
24-26 Fuel oil (Bbl.).....	– .925	$ .95 – .975	†$1.05 – 1.10
22-26 Fuel oil (Bbl.).....	$.90 – .925	–$ .95	$1.00 – 1.05
18-22 Fuel oil (Bbl.).....	– .90	–$ .90	$ .95 – 1.00
16-18 Fuel oil (Bbl.).....	.....	.....	–$ .95
14-16 Fuel oil (Bbl.).....	.....	.....	$ .90 – .95
†Prices nominal.			
KANSAS*			
38-40 straw distillate...	– 3.75	– 3.75	– 3.75
36-38 straw distillate...	– 3.25	– 3.25	– 3.25
32-36 Gas Oil.....	2.75 – 3.00	2.75 – 3.00	– 3.00
24-26 Fuel Oil.....	$1.10 – 1.15	$1.10 – 1.15	$1.15 – 1.20
18-22 Fuel Oil.....	–$1.00	$1.00 – 1.05	$1.05 – 1.10
*F. O. B. refinery Kansas destination.			
NORTH TEXAS			
38-40 Straw distillate.....	– 3.00	– 3.00	– 3.00
32-36 Gas Oil (Gal.)cracked	– 2.50	– 2.50	– 2.625
32-36 uncracked gas oil....	2.50 – 2.75	2.50 – 2.75	2.625– 2.75
24-26 Fuel per (Bbl.).....	$ .875– .925	– $.95	$1.00 – 1.05
GULF COASTAL			
Fuel.....	$1.60 – 1.65	$1.60 – 1.65	$1.60 – 1.65
Gas Oil.....	4.50 – 4.75	4.50 – 4.75	4.75 – 5.00

NORTH LOUISIANA	Prices May 2	Prices Apr. 25	Prices Apr. 18
32-36 Gas oil, cracked (Gal.).	– 2.75	– 2.75	– 2.75
32-36 Gas oil, uncracked (Gal)	– 3.00	– 3.00	– 3.00
16-20 Fuel Oil (Bbl.)...	$1.10 – 1.15	$1.10 – 1.15	$1.10 – 1.15
ARKANSAS			
28-32 Gas oil.....	3.25 – 3.50	3.25 – 3.50	3.50 – 3.75
32-36 Gas oil.....	3.50 – 3.75	3.50 – 3.75	3.75 – 4.00
*Smackover Crude Fuel....	–$1.15	–$1.15	–$1.15
*For unrestricted shipment.			
CALIFORNIA*			
14-18 Fuel Oil (Bbl.)...	$ .70 – 1.00	$ .70 – 1.00	$ .80 – 1.00
14-18 Bunker Oil (Bbl.).	$ .70 – 1.00	$ .70 – 1.00	$ .80 – 1.00
30-34 Gas Oil (Bbl.)....	$1.20 – 1.25	$1.20 – 1.25	$1.20 – 1.25
27 + Diesel Oil (Bbl.)..	–$1.15	–$1.15	–$1.15
*(San Joaquin Valley, San Francisco 4c per bbl. more.)			
NEW ENGLAND (F. O. B. Boston and Fall River)			
30-32 Gas Oil (Gal.).....	– 5.92	– 5.92	– 5.92
Fuel Oil (Bunker C) Bbl...	–$1.88	–$1.88	–$1.88

PETROLATUMS

PENNSYLVANIA (Cents Per Pound in Tank Cars)*			
Snow White.....	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
Lily White.....	– 6.25	– 6.25	– 6.25
Cream White.....	– 5.25	– 5.25	– 5.25
Light Amber.....	2.625– 2.75	2.625– 2.75	2.625– 2.75
Amber.....	2.375– 2.50	2.375– 2.50	2.375– 2.50
Red.....	– 2.125	– 2.125	– 2.125
Green No. 5 Color.....	– 1.50	– 1.50	– 1.50
*In barrels .75c a pound more, carlots.			

PETROLEUM COKE

OKLAHOMA (Per ton in carlots)			
Lump.....	–$5.00	–$5.00	–$5.00
Breeze.....	– 2.00	– 2.00	– 2.00
Still Run.....	– 3.00	– 3.00	– 3.00

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

(Continued from Page 113)

spot shipment was reported unobtainable under 2.625 cents today.

All grades of fuel oil, except 18-22, were off from 5 to 10 cents a barrel, and refiners reported it was hard to get more for 28-30 gravity oil than could be got for the heaviest grade. Prevailing quotations today were 95 to 97.5 cents for 28-30, 95 for 26-28, 92.5 for 24-26, 90 to 92.5 for 22-26 and 90 for 18-22. No appreciable quantity of any lower gravity oil than 18-22 is being cut at the present.

An order for 30,000 barrels of fuel oil was placed in north Texas this week for northwest shipment. The oil was reported sold at 80 cents a barrel f. o. b. Burkburnett, for shipment over May, and 20,000 barrels of the total was to move from this point, the remainder of the order being placed, it was understood, in Wichita Falls.

Demand for neutral oils and cylinder stocks was reported good this week and only minor changes are noted in the price lists of refiners.

Wax quotations were generally unchanged this week and the few actual sales reported were made at 2.75 cents a pound. Two exporters are offering 3 cents, New Orleans, which figures 2.75 cents, Group 3, for their six months' requirements, and one refiner stated he took this as indication that the wax market had reached the bottom.

Steadier Tone Noted in New York Domestic Gasoline Market

By Special Correspondent

NEW YORK, May 2

WHILE the Philadelphia and Baltimore gasoline markets were soft last week, the New York market was much steadier toward the close. Large New York harbor refiners were asking 9 cents a gallon for U. S. Motor gasoline, in bulk at the refineries and 10 cents delivered to nearby trade. Little gasoline was available at 8.75 cents a gallon refinery.

At Philadelphia it was reported an Independent refiner was willing to take 8.25 cents a gallon refinery although the leading refiner was asking 8.75 cents. A good deal of this gasoline is being shipped up state New York and being confused with New York Harbor gasoline.

Baltimore refiners were quoting 8.75 cents a gallon, refinery, with reports that 8.25 cents was being done but no large refiner was openly quoting the lower price. While there has been some fairly large receipts of gasoline from the Pacific coast, many small factors who have been bringing this gasoline around, are reluctant to buy more at prevailing prices. One broker pointed out that U. S. Motor was 6 cents on the coast and freight 2.5 cents so California gasoline could be laid down here for less than 8.5 cents. In view of the uncertain outlook they are unwilling to buy much gasoline.

Jobbing demand for gasoline along the Seaboard was more active last week. Weather has improved and consumption is steadily gaining although most buyers are still purchasing as needed. Tank-wagon prices are weak. In one or two parts of New York the service station price is 14 cents a gallon, although the posted tank wagon price is 19 cents a gallon.

At the Gulf U. S. Motor gasoline was available at 7.25 cents a gallon at the refineries. Demand is increasing.

Kerosene was barely steady at New York. Most large buyers have been confining their purchases to immediate requirements. For 43-45 water white at New York Harbor refineries the price was 7.25 to 7.5 cents a gallon and 7 cents for 41-43 water white. At the Gulf 41-43 water white was 5.25 cents a gallon and 44 water white was 6.25 cents, f.o.b. refineries.

More Active Buying Predicted For May in Chicago Market

Staff Special

CHICAGO, April 30.

SPOT buying of light oils was quiet this week in Chicago. Small volumes of 58-60 U. S. Motor gasoline were moved by all sellers. There were a few sales of high tests. Kerosene demand was small generally, but one refiner reported good buying of his kerosene from Ohio and Oklahoma refineries.

May market is to be more active than the April market. Chicago sellers predict. This belief is based on the small number of May gasoline contracts signed, and the fact that refiners have not done any large selling to either carload marketers or jobbers over May as was the case late in March for April. One marketer reported refiners were reluctant to quote gasoline for over May and consequently jobbers have not been quoted by marketers. Sellers report jobbers apparently are willing to take care of their May requirements on the spot market rather than on contract.

Prices and quotations for gasoline and kerosene were steady this week. U. S. Motor gasoline was 6.25 to 6.50 cents; 60-62, 437 end point was 6.375 to 6.50 cents; 60-62, 400 e. p. was 6.75 cents until Wednesday when the market was 6.625 to 6.75 cents; 64-66, 375 e. p. was 7.25 cents; and 68-70, 350-360 e. p. was quoted at 7.75 cents. The 41-43 water white kerosene Monday was 4.25 to 4.50 cents; Tuesday 4.25 to 4.375 cents and Wednesday on 4.25 cents flat.

In the heavy oil markets spot business was quiet and inquiries for over May were reported as average. Industrial fuel and gas queries for May were small. One marketer reported gas oil had strengthened in the field and that refiners would rather store than sell at present prices. One Oklahoma refiner is to resume cracking May 1.

The 38-40 straw distillate was offered at 3.25 to 3.375 cents until Wednesday when the market went to 3.25 cents flat for the rest of the week. The 32-36 straw gas oil was 2.875 cents with some sellers asking 3 cents at the beginning and end of the week; 32-36 dark gas oil was steady at 2.625 to 2.75 cents.

Fuel prices, except 18-22, were steady the first three days and were fractionally lower at the close. The 28-30 fuel was $1.05 to $1.10 a barrel through Wednesday. $1.05 Thursday and closed at $1.00 to $1.05; 24-26 grade was $1.00 until Thursday and closed at 97.5 cents to $1; 22-26 fuel was 97.5 cents to $1.025 the first three days and 95 to 97.5 cents from Thursday on; 18-22 grade was unchanged over the week at 95 cents. Smackover shipments continued irregular on account of floods in Arkansas. Quotations here were $1.15 all week.

One or more precipitation periods are forecast for next week in Standard Oil Co. of Indiana territory. Temperature is to be normal or below most of week.

PLATT'S
OILGRAM
Petroleum Markets-Every Day

5 CRUDE CUTS IN 8 WEEKS

MID-CONTINENT crude was cut on Feb. 22nd, March 5, March 12, April 7, and again April 20---

***When* and *where* will the next crude or tank wagon change be?**

What are the exact prices at which gasoline and kerosene moved in the past 12 hours? Or lubricating oils, or export prices at the Gulf and New York?

You'd know the answer to these questions *this morning*, if you had the OILGRAM on your desk. It's your protection against quick changes in the market situation.

If you ever needed to keep in daily contact with the oil markets---IT IS NOW.

30c a day will bring this fast daily market service to you, $75 a year, or $25 for 3 months. Order your service from the nearest mailing point---TODAY.

TULSA—904 World Bldg.
CHICAGO—35 E. Wacker Drive
CLEVELAND—894 Caxton Bldg.

Flood Holds Up Gulf Lube Shipments

Staff Special

HOUSTON, April 30.—Lubricant demand is again quiet in the Houston manufacturing district but prices are unchanged. Transportation into the Mississippi river flood area in Arkansas, Louisiana and Mississippi is held up, the situation affecting perhaps a dozen cars of lubricants.

The flood area is supplied gasoline and kerosene requirements from other refining districts, but advices from the affected territory are that light oil demand will be curtailed possibly as much as 50 per cent for an indefinite period.

LIVINGSTON, TENN.—The Cooperative Oil Co., with headquarters here, which was organized on Jan. 1 by R. B. Oakley and W. F. Reagan to do a general oil jobbing and retail business, is building a chain of service stations which will be operated as Motor-Inn Service Stations. Two stations are now in operation, according to Mr. Reagan.

Week's Price Changes Tank Wagon Markets

Gasoline Changes

Standard of New York—T.w. and s.s. prices gasoline reduced 2 cents, Boston and eastern Massachusetts coast up to Cape Cod, **April 29.**

Atlantic Refining—T.w. and s.s. prices gasoline reduced 2 cents, through New England, **April 26.**

Standard of Indiana—T.w. and s.s. prices gasoline reduced 3.5 cents, Huron, S. D. to 15.5 cents and 17.5 cents respectively, **April 23.**

Magnolia Petroleum — Correction: Prices at Texarkana, Ark. since March 16 should have been 20 cents, and since April 19, 19 cents.

Continental Oil—Correction: T.w. and s.s. prices of gasoline at Helena should have been 22.5 cents and 24.5 cents respectively since March 23, instead of 22 cents and 24 cents, as published in the past issues.

Colorado tax on gasoline advanced 1 cent, May 1, to 3 cents, but gasoline prices were unchanged.

Canada—T.w. and s.s. prices gasoline advanced 1 cent, Alberta, to cover tax increase to 3 cents, **May 1.**

Kerosene Changes

Standard of New York—Kerosene prices reduced 1 cent, New York and New England, to 15 cents generally tank wagon, **April 29.** Buffalo and Rochester are unchanged at 14 cents.

Atlantic Refining—Kerosene prices reduced 1 cent, New England, to 15 cents t.w. generally, **April 29.**

Magnolia Petroleum—Kerosene reduced 4 cents, Dallas, to 11 cents t.w., **April 29.**

Correction

The article on the Standard Oil Co. of Ohio's Q. D. A. contracts on Page 20 of the April 27 issue contained two inaccuracies about current prices. The Standard's full retail price, or service station price, within the state, was given as 20 cents plus the tax, when it is actually 20 cents including the tax. Roxana Petroleum Corp.'s prices in the western part of the state were given as 16 cents tank wagon, and 18 cents service station, plus the tax, when these figures really include the tax.

Eastern Kentucky Refinery Market

ASHLAND, May 2.—Current demand for all products in eastern Kentucky refinery markets is exceptionally good. Output of all products is practically committed for first half of May, according to reports. Price on U. S. motor gasoline is not being quoted. High gravity gasolines are ¼ cent lower than last Monday. Low gravity fuel oil is down ⅛ cent. Kerosene, gas oil and 24-26 fuel oil are unchanged.

Quotations on May 2 were:

58-60 gasoline	No quotation
60-62 gasoline	9.50
64-66 gasoline	9.75
68-70 gasoline	10.50
41-43 w.w. kerosene	6.75
34-36 gas oil	5.25
24-26 fuel oil	4.25
14-16 fuel oil	4.25

Tank Wagon, Service Station Markets for Gasoline and Kerosene In United States Territories and Canada

These Prices In Effect May 2, 1927

S. O. NEW JERSEY TERRITORY

	Gasoline			Oil
	T.W.	Tax	Total T.W.	S.S.	T.W.
Atlantic City, N. J.	16	0	16	*	14
Newark, N. J.	16	0	16	18	14
Annapolis, Md.	16	4	20	*	14
Baltimore, Md.	16	4	20	23	10
Cumberland, Md.	16	4	20	23	14
Washington, D. C.	16	2	18	21	12
Danville, Va.	16	4½	20.5	*	14
Norfolk, Va.	16	4½	20.5	23.5	14
Richmond, Va.	16	4½	20.5	23.5	14
Roanoke, Va.	16	4½	20.5	23.5	14
Petersburg, Va.	16	4½	20.5	23.5	14
Williamsburg, Va.	16	4½	20.5	*	14
Charleston, W. Va.	16	3½	19.5	22.5	14
Clarksburg, W. Va.	16	3½	19.5	22.5	14
Keyser, W. Va.	16	3½	19.5	*	14
Parkersburg, W. Va.	16	3½	19.5	22.5	14
Wheeling, W. Va.	16	3½	19.5	22.5	14
Charlotte, N. C.	16	4	20	23	14
Hickory, N. C.	16	4	20	23	14
High Point, N. C.	16	4	20	*	14
Mt. Airy, N. C.	16	4	20	23	14
Salisbury, N. C.	16	4	20	23	14
Charleston, S. C.	15	5	20	23	14
Columbia, S. C.	15	5	20	20	14

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

*New York City	19	0	19	23	15
Albany, N. Y.	19	0	19	21	15
Buffalo, N. Y.	16	0	16	19	14
†Rochester, N. Y.	15	0	15	18	14
Syracuse, N. Y.	19	0	19	21	15
Boston, Mass.	17	0	17	19	15
Augusta, Me.	19	3	22	25	15
Manchester, N. H.	19	2	21	23	15
Burlington, Vt.	19	2	21	23	15

*In steel barrels.

†It is reported that S. O. New York is selling a second grade of gasoline at Rochester, 4c below the above posted prices which apply on its Socony grade.

ATLANTIC REFINING

Pittsburgh, Pa.	16	*	16	*21	14
Philadelphia, Pa.	15	*	15	*20	14
Allentown, Pa.	16	*	16	*21	14
Erie, Pa.	14	*	14	*19	14
Scranton, Pa.	16	*	16	*21	14
Altoona, Pa.	16	*	16	*21	14
Dover, Del.	16	3	19	22	14
Wilmington, Del.	16	3	19	22	14
Providence, R. I.	17	1	18	20	15
Boston, Mass.	17	0	17	19	15
Springfield, Mass.	17	0	17	19	15
Worcester, Mass.	17	0	17	19	15
Hartford, Conn.	17	2	19	21	15
New Haven, Conn.	17	2	19	21	15

*2-cent state tax is collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	13	5	18	21	15.5
Louisville, Ky.	14	5	19	22	15
Covington, Ky.	15	5	20	23	15.5
Clarksdale, Miss.	15	4	19	22	13.5
Gulfport, Miss.	††16.5	4	††20.5	23.5	14
Jackson, Miss.	15	4	19	22	14.5
Natchez, Miss.	14.5	4	18.5	21.5	14
Vicksburg, Miss.	14.5	4	18.5	21.5	14
Birmingham, Ala.	16	4	20	23	15.5
Mobile, Ala.	15	4	19	22	15
Montgomery, Ala.	17	4	21	24	*16.5
Atlanta, Ga.	†16	3½	20	23	16
Augusta, Ga.	†16	3½	20	23	16
Macon, Ga.	†16	3½	20	23	16
Savannah, Ga.	†14	3½	18	20	14
Jacksonville, Fla°	14	4	18	21	14
Miami, Fla°	16	4	20	23	15.5
Tampa, Fla°	14	4	18	21	14
Pensacola°	**15	4	**19	22	15

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

†Georgia has ½ cent per gal. inspection fee on gasoline which is deducted as well as the state gasoline road tax of 3½ cents, to get the actual net tank wagon market to dealer.

°Florida gasoline prices include ½c inspection fee.

**Both tank wagon prices include 1c city tax at Pensacola, which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

S. O. INDIANA

		Gasoline			Oil
	T.W.	Tax	Total T.W.	S.S.	T.W.
Chicago, Ill.	16	0	16	18	13
Decatur, Ill.	16.2	0	16.2	18.2	13.1
E. St. Louis, Ill.	15.1	0	15.1	17.35	12.2
Joliet, Ill.	16.4	0	16.4	18.4	13.3
Peoria, Ill.	16.2	0	16.2	18.2	13.1
Quincy, Ill.	14.2	0	14.2	16.2	10.9
Indianapolis, Ind.	16.2	3	19.2	21.2	14.2
Evansville, Ind.	16	3	19	21	14
South Bend, Ind.	16.4	3	19.4	21.4	14.4
Detroit, Mich.	16.8	2	18.8	20.8	14.7
Grand Rapids, Mich.	16.7	2	18.7	20.7	14.6
Saginaw, Mich.	16.9	2	18.9	20.9	14.8
Green Bay, Wis.	16.6	2	18.6	20.6	13.4
Madison, Wis.	16.3	2	18.3	20.3	13.1
Milwaukee, Wis.	16.1	2	18.1	20.1	12.9
La Crosse, Wis.	17.2	2	19.2	21.2	14
Minneapolis, Minn.	15.2	2	17.2	19.2	13.9
Duluth, Minn.	17.5	2	19.5	21.5	13.9
Mankato, Minn.	17.1	2	19.1	21.1	13.7
Des Moines, Iowa	14	2	16	18	13.3
Davenport, Iowa	16.5	2	18.5	20.5	13.3
Sioux City, Iowa	16.1	2	18.1	20.1	12.9
Mason City, Ia.	16.5	2	18.5	20.5	13.3
St. Louis, Mo.	*15.6	2	17.6	19.9	12.3
Kansas City, Mo.	†16	2	18	20	11.6
St. Joseph, Mo.	†16.5	2	18.5	20.5	12.2
Fargo, N. D.	18.9	2	20.9	22.9	15.9
Grand Forks, N. D.	19.2	2	21.2	23.2	16.2
Minot, N. D.	18.9	2	20.9	22.9	15.9
Pierre, S. D.	17.5	3	20.5	22.5	14.9
Huron, S. D.	12.5	3	15.5	17.5	14.9
Wichita, Kans.	14.8	2	16.8	18.8	11.8
Bartlesville, Okla.	14	3	17	19	11.8

S. O. Indiana Q. D. A. schedule on tank wagon deliveries of gasoline, effective March 3 thru territory, except Wisconsin effective March 4: 50 gals. and over on delivery, 1c discount; 6,000 gals. and over per month, 1½c; 10,000 gals. and over per month, 2c; 15,000 gals. and over per month, 3c, except latter discount does not apply in Chicago.

Service station discounts: 200 gals. or more per month, and 2400 gals. or more per year, 2c per gal.

March 1, 1c discount on kerosene in 50 gal. dumps thru territory.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. NEBRASKA

Omaha, Neb.	14.25	2	16.25	19.25	13.25
McCook	17.75	2	19.75	21.75	14.75
Norfolk	16	2	18	20	13.75
North Platte	17.75	2	19.75	21.75	14.5
Scottsbluff	17.25	2	19.25	21.25	14

CONTINENTAL OIL

Denver, Colo.	15	3	17	17	15.5
Pueblo, Colo.	15	3	17	18	15.5
Grand Junction, Colo.	18.5	3	20.5	22.5	19
Casper, Wyo.	15	3	18	20	14
Cheyenne, Wyo.	15	3	18	20	15.5
Butte, Mont.	19	3	22	22	19
Helena, Mont.	19.5	3	22.5	24.5	19
SaltLake City, Utah.	17.5	3½	21	23	17
Boise, Ida.	19.5	4	23.5	25.5	19
Twin Falls, Ida.	19.5	4	23.5	25.5	19
Albuquerque, N. M.	16	5	21	24	18

S. O. CALIFORNIA

Phoenix, Ariz.	16	3	19	23	21.5
Los Angeles, Cal.	6.5	2	8.5	12.5	13.5
Fresno, Cal.	9	2	11	15	16.5
San Francisco, Cal.	9	2	11	15	15.5
Reno, Nev.	15	4	19	23	19
Portland, Ore.	11	3	14	18	16.5
Seattle, Wash.	11	2	13	17	16.5
Spokane, Wash.	15	2	17	21	20.5
Tacoma, Wash.	11	2	13	17	16.5

S. O. LOUISIANA

Little Rock, Ark.	13	4	17	20	12
Alexandria, La.	13	2	15	18	†14
Baton Rouge, La.	12	2	14	17	†12.5
Lake Charles, La.	13.5	2	15.5	18.5	†14
New Orleans, La.	*13.5	2	15.5	18.5	*14
Shreveport, La.	12	2	14	17	†13
Lafayette, La.	13	2	15	18	†13.5
Bristol, Tenn.	16	3	19	22	14
Chattanooga, Tenn.	16.5	3	19.5	22.5	15
Knoxville, Tenn.	16.5	3	19.5	22.5	15
Nashville, Tenn.	13.5	3	16.5	19.5	15
Memphis, Tenn.	14	3	17	20	14

*Includes 1c parish tax on gasoline and 2c tax on kerosene: 1c parish tax and 1c state tax.

†Kerosene prices in Louisiana include 1c state tax.

S. O. OHIO

		Gasoline			Oil
	T.W.	Tax	Total T.W.	S.S.	T.W.
All Ohio points	16	2	18	20	15

MAGNOLIA PETROLEUM

Muskogee, Okla.	13	3	16	19	10
Oklahoma City	13	3	16	19	10
Tulsa, Okla.	13	3	16	19	10
Fort Smith, Ark.	13	4	17	20	12
Little Rock, Ark.	13	4	17	20	12
Texarkana, Ark.	†15	4	†*19	†*19	12
Dallas, Tex.	†13	3	†16	†16	11
Fort Worth, Tex.	†14	3	†17	†17	13
Houston, Tex.	†16	3	†19	†19	15
San Antonio, Tex.	†13	3	†16	†16	11
El Paso, Tex.	**16	3	**19	**19	16

*Within city of Texarkana the state tax on gasoline is 3c per gal. conforming with the Texas state tax. In Texarkana district outside of the city the 4c state tax applies.

†3c per gal. discount to dealers.

**2c per gal. discount to dealers at El Paso, Feb. 28.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M. & P. Naphtha	Cleaner Naphtha
Chicago	17	19	19
Detroit	18.7	20.7	20.7
Kansas City	18.2	†20.2	†20.2
Milwaukee	17.7	*21.7	*21.7
Minneapolis	*21	*23	*23
St. Louis	16.9	18.9	18.9
New York		21	

*Includes 2c state tax.

†Includes 1c city tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

ONTARIO

		Gasoline			Oil
	T.W.	Tax	Total T.W.	S.S.	T.W.
Toronto	22.5	3	25.5	29	22
Ottawa	22.5	3	25.5	29	22
Cochrane	27.5	3	30.5	39	27
Ft. William	25.5	3	28.5	32	24.5

MANITOBA

Winnipeg	25.5	3	28.5	32	24.5

SASKATCHEWAN

Regina	28.5	0	28.5	33	28.5

ALBERTA

Edmonton	27.5	3	30.5	34	26.5
Calgary	25.5	3	28.5	32	24.5

BRITISH COLUMBIA

Vancouver	21	3	24	28	22

QUEBEC

Montreal	22.5	3	25.5	29	22
Quebec City	24.5	3	27.5	31	24
Three Rivers	24.5	3	27.5	31	24

NEW BRUNSWICK

St. John	25.5	3	28.5	33	25
Moncton	25.5	3	28.5	33	25

NOVA SCOTIA

Halifax	25.5	3	28.5	33	25
Sydney	27.5	3	30.5	35	27

PRINCE EDWARD ISLAND

Charlottetown	25.5	3	28.5	32	25

Note: In districts surrounding these points 1c additional is added to city price.

Export Agents More Interested in Market But Buying Continues Light

Special Correspondent
NEW YORK, May 2

ALTHOUGH export buyers followed the markets more closely last week few purchases were made. Gasoline was cheaper at the Gulf. Kerosene also was a shade easier.

Gas oil business was disappointing. Waxes declined at New York and the Gulf as buying slumped. There was a slight improvement in demand from France for Pennsylvania oils. Bunker oil was barely steady at New York and easier at the Gulf.

Export Gasoline—New York

Most large exporters reported few foreign inquiries. One, however, was working on an inquiry from France for 45,000 barrels of U. S. Motor and 64-66, 375 end point for May-June shipment and expects to close this shortly. Leading refiners were asking 9 cents a gallon for U. S. Motor at refineries. Improvement in domestic demand has improved sentiment.

Cased gasoline was in slightly better demand. A large Independent sold 50,000 cases of U S. Motor and 64-66 gasoline for June shipment to the Near East. Another Independent booked an order for 35,000 cases of U. S. Motor and 64-66, 375 end point for May-June shipment to the Far East, presumably Japan. Early in the week, the Standard Oil Co. of New Jersey reduced the price of U. S. Motor gasoline in cases 0.50 cent to 23.90 cents a gallon.

Export Gasoline—Gulf Ports

Prices were lower at the end of the week. It was reported a leading refiner had sold 50,000 barrels of U. S. Motor, 64-66, 375 end point gasoline and a small volume of kerosene for June shipment to the Continent.

U. S. Motor was quoted at 7 cents. Other grades were quoted as follows: 60-62, 400 e. p. at 7.25 cents; 61-63, 390 e. p. at 7.50 cents and 64-66, 375 e. p. at 8 cents. One refiner was reported offering the last at 8.50 cents a gallon. Cased gasoline was quiet and U. S. Motor was offered at $1.65 and 64-66 at $1.75 a case, cargo lots.

Export Kerosene—New York

Export demand for kerosene was light. Standard Oil Co. of New Jersey reduced case kerosene 0.50 cent a gallon and is now quoting standard white at 16.15 cents and water white at 17.15 cents a gallon. There is a fairly good contract movement to the west coast of Africa but fresh buying was restricted to small lots.

Water white 41-43 was freely offered at 7 cents a gallon, at refineries, and 43-45 water white was obtainable at 7.25 to 7.50 cents, same basis.

Export Kerosene—Gulf Ports

Inquiry from the United Kingdom for bulk kerosene was better. One Independent reported an inquiry for 35,000 barrels of prime and water white for June shipment but this is hanging fire. At the end of the week 41-43 water white was held at 5 cents and 44 water white at 6 cents a gallon. Cased kerosene remained quiet at $1.45 a case for prime white and $1.55 for water white, in cargo lots.

Waxes—New York

Wax prices again declined. There was a slump in demand and virtually no buying interest was shown late in the week. Most large export buyers are out of the market. There was more pressure to sell and white crude scale, both 122-124 and 124-126 A.m.p., was freely offered at 3 cents a pound, a decline of 0.125 cent, without attracting buyers. Fully refined waxes were equally dull with 123-125 A.m.p. 4 cents.

Waxes—Gulf Ports

Export buyers showed little or no interest in the Gulf wax markets and trading was virtually at a standstill. Leading factors were freely offering 124-126 A.m.p. white crude scale at 3 cents a pound while 124-126 A.m.p semi-refined was offered at the same price without attracting buyers.

Fully refined grades were almost stagnant. Domestic demand was strictly hand-to-mouth. A little wax being shipped abroad against standing contracts but no fresh buying was heard of. Closing prices were: 125-127 and 128-130 A.m.p. 4 cents; 133-135 5 cents; 135-137 5.875 cents; and 124-126 yellow crude scale 2.75 cents.

Bunker Oil—New York

Leading refiners reported a fairly good spot demand for bunker C oil at $1.75 a barrel, f. o. b. New York harbor refineries, and $1.815 cents a barrel f.a.s New York harbor. The movement was chiefly against standing contracts. Diesel oil though weak was still quoted at $2.30 a barrel f. o. b. New York harbor refineries.

Bunker Oil—Gulf Ports

Export buyers showed little interest in bunker oil but prices were fairly steady. At New Orleans the f. o. b. price for bunker oil was $1.55 a barrel and for cargo oil $1.40 a barrel. At Tampico the price for bunkering was $1.60 a barrel including taxes. Heavy Panuco crude oil was 10 cents cheaper at $1.20 a barrel f.o.b. Tampico taxes to be added.

Gas Oil—New York

New York gas oil market lacked strength. There were reports of shading. Export demand was light and domestic buying was hand-to-mouth. The depression in the other petroleum products is held largely responsible for the slump in demand. New York harbor refiners were asking 5.75 cents a gallon for 36-40 and 5.50 cents a gallon for 28-34 in bulk at the refineries.

Gas Oil—Gulf Ports

One large refiner was working on an inquiry from the Continent, presumably Germany, for 40,000 barrels of 26-28 red translucent gas oil for May shipment. For 32 plus dark oil the asking price was 4.25 cents a gallon with rumors current that one refiner was offering at 4 cents. The price for 32 plus translucent was 4.375 to 4.50 cents a gallon.

Lubricating Oil—New York

Demand for Pennsylvania lubricating oils was less active. Stocks abroad are low as a result of the hand-to-mouth buying that has been going on for some time. Prices have been holding up

Exports from Tampico District

Company	February	March
Transcontinental Petroleum Co., (Standard of New Jersey)	495,331	219,091
Pan American Eastern Oil Co.	1,846,748	1,687,917
Mexican Eagle Oil Co., (El Aguila)	741,115	806,329
Cia. Mexicana Holandesa "La Corona"	444,767	602,970
The Texas Co. of Mexico, S. A.	115,988	85,727
Mexican Gulf Oil Co.	248,815	173,297
Sinclair Mexican Companies	477,866	492,795
East Coast Oil Co. of Mexico, S. A., (Southern Pacific)	9,634	51,459
Mexican Oil Products Co.	23,748	.....
Pierce Oil Corp.	.....	2,430
Mexican Atlas Oil Co.	23,924	41,681
La Espuela Oil Co.	66,199	113,574
Moctezuma Terminal	20,844	20,892
New England Fuel Oil Co.	.....	48,898
Panuco Boston Oil Co.	.....	48,704
Totals	4,514,979	4,595,863

Complete Export Markets

New York Export Market

GASOLINE	May 2	Apr. 25
U. S. Motor f. o. b. New York Harbor	8.75- 9.00	8.75- 9.00
U. S. Motor cases	23.90	24.40
KEROSENE		
43-45 150 W. W. Bulk Ref.	7.25	7.25
41-43 Prime White Bulk Ref.	7	7
43-45 150 W. W. Cases	17.15	17.65
42-44 110 S. W. Cases	16.15	16.65
GAS OIL		
36-40 Bulk Refinery	5.75	5.75
28-34 Bulk Refinery	5.50	5.50
MEXICAN BUNKER OIL		
Grade C. f. o. b. ref. Bulk	-$1.75	-$1.75
Diesel Oil f. o. b. ref. Bulk	-$2.30	-$2.30

LUBRICATING OILS

The following are cooperage basis f. o. b. New York, products being manufactured by inland refineries.

CYLINDER OILS (per Gallon in Barrels)

1 inch Immersion Test; All Penna. Products		
Bright Stock dark	39.00	39.50
Filtered D 600	30.00	32.00
Filtered E 600-Warren	26.50	26.50
Unfiltered 600 s. r.	17.00-17.50	18.00
Unfiltered 650 s. r.	21.00	22.00
600 Flash s. r.	24.00	24.00
630 Flash	36.00	38.00

RED PARAFFIN (per Gallon in Barrels)

(Viscosity at 70)		
300 vis. No. 5 color	-19.00	-19.00
250 vis. No. 5 color	-17.00	-17.00
475 vis. No. 5 color	-21.50	-21.50

NEUTRAL OILS (per Gallon in Barrels)

(Viscosity at 70)		
200 Pale. No. 3 color	-42.50	-42.50
180 Pale. No. 3 color	-37.75	-37.75
150 Pale. No. 3 color	-36.25	-36.25

BLACK OIL (per Gallon in Barrels)

25-30 cold test	13.25	13.25
15 cold test	14.25	14.25

MEDICINAL OILS (Includes Price of Drums) (Penna Stocks)

	May 2	Apr. 25
Domestic 875-.885 s. g.	- .85	- .85
Domestic 865-.870 s. g.	$ .75 - .80	$ .75 - .80
Russian 885-.890 s. g. 325-330 vis.	$1.00 - 1.10	$1.00 - 1.10

WAXES (Penna Stocks) (In Cents per Pound, F. A. S. Carload Lots)

WHITE CRUDE SCALE (Shipped in Bbls.)

122-124 A. m. p.	- 3.00	- 3.125
124-126 A. m. p.	- 3.00	- 3.25

FULLY REFINED (Shipped in Burlap Bags)

123-125 A. m. p. Philadelphia	- 4.00	- 4.00
125-127 A. m. p.	- 4.00	- 4.00
128-130 A. m. p.	- 4.125	- 4.125
130-132 A. m. p.	- 4.375	- 4.50
133-135 A. m. p.	- 5.25	- 5.25
135-137 A. m. p.	- 5.70	- 5.75
YELLOW CRUDE SCALE		
124-126 A. m. p.	- 2.95	- 3.125

PETROLATUMS (Penna Stocks) Per Pound

Dark Green	- 2.00	- 1.875
Veterinary	- 3.125	- 3.125
Light Amber	- 3.750	- 3.750
Dark Amber	- 3.375	- 3.375
Cream	- 5.75	- 6.
Lily White	- 7.50	- 7.50
Snow White	- 8.50	- 8.50

Gulf Export Market

GASOLINE F. O. B. Seaboard (Shipments of 20,000 Bbls. and over)	May 2	Apr. 25
U. S. Motor Bulk	7.00	7.50
60-62 400 e. p. Bulk	7.25	7.750
61-63 390 e. p. Bulk	7.50	8.125
64-66 375 e. p. Bulk	8.00	8.750
U. S. Motor, Cases (cargo lots)	$1.65	$1.70
64-66 Cases (cargo lots)	$1.75	$1.90
KEROSENE		
Water White, 43-45 Bulk	6.00	6.50
Prime White, 41-43 Bulk	5.00	5.50
Water White, cases (cargo lots)	$1.55	$1.60
Prime White, cases (cargo lots)	$1.45	$1.50
DOMESTIC GAS AND BUNKER OIL		
26-28, gravity, Bulk*	4.25	4.25
32 plus, bulk, Dark	4.125	4.125
Grade C, Bunker oil	$1.55	$1.55
Cargoes	$1.40	$1.40

*Translucent through neck of a 4 oz. bottle.

MEXICAN CRUDE AND BUNKER OILS F. O. B. Steamer Tampico		
Heavy, Panuco crude Taxes to be added	$1.20	$1.30
Grade C, Bunker oil, F. O. B. Tampico, For Bunkering Purposes, taxes paid.	$1.60	$1.60

SOUTH TEXAS (Viscosity at 100° F; cold test 0) (Tanker, F. O. B. Houston)

LUBRICATING OILS	May 2	Apr. 25
100 Vis. No. 2 Unfiltered Pale	6.50	7.00
150 Vis. No. 2½ Unfiltered Pale	9.00	9.50
200 Vis. No. 3 Unfiltered Pale	9.50	10 00
300 Vis. No. 3 Unfiltered Pale	10.50	11 00
500 Vis. No. 3½ Unfiltered Pale	13.00	13 00
200 Vis. No. 5½ Red Oil	8.00	8.50
300 Vis. No. 5½ Red Oil	9.00	9.50
500 Vis. No. 6 Red Oil	11.00	11.00

Pacific Export Market

(Cargo lots quotations at seaboard, Los Angeles Gravity test on A.P.I. scale)

	May 2	Apr. 25
Gasoline, U. S. Motor—53°-55°	5.50- 6.50	6.50- .07
Gasoline, U. S. Motor—blends and special cuts	7.00- 8.00	7.50- .09
Gas Oil, 30°—34° bbls.	$1.05 - 1.10	$1.05 - 1.10
Diesel Oil, 27°—plus bbls.	$ .90 - .95	$ .90 - .95
Bunker Oil, 14°—18° bbls.	$ .70 - 1.00	$ .70 - 1.00
Fuel Oil, 14°—18° bbls.	$ .70 - 1.00	$ .70 - 1.00
Kerosene, W. W. 38°—40°, 125-150 flash test (Gals.)	.0550 - .0650	.0550 - .0650
Cased Goods		
Gasoline, U. S. Motor	$1.70 - 2.00	$2.25 - 2.40
Kerosene, W. W. 38°—40°, 125-150 flash	$1.45 - 1.55	$1.50 - 1.60

N. Y. Domestic Market

The following light oil, gas and fuel oil prices are F. O. B. New York refineries being products made from Domestic (including California) and Mexican Crudes

GASOLINE	May 2	Apr. 25
U.S.Motor Tank Cars De'd greater N.Y	9.75 - 10.00	9.75 -10.00
Calif. U. S. Motor tank cars, f.o.b. New York Harbor	- 8.75	. 8.75
U.S.Motor Tank Cars, f. o. b. New York Harbor	8.75 - 9.00	8.75 - 9.00
KEROSENE		
43-45 150 W.W.Tank Cars de'd greater N. Y.	- 8.25	- 8.50
41-43, Buk Ref. Prime	7.00 - 7.50	7.00- 7.50
FUEL OILS		
Grade C Bunker f. o. b. N. Y. Ref.	-$1.75	-$1.75
Diesel Oil f. o. b. Refinery	-$2.30	-$2.30
Gas Oil, 36-40, Bulk Refinery	- 5.75	- 5.75
Gas Oil, 28-34, Bulk Refinery	- 5.50	- 5.50
Furnace Oil, 38-42, Bulk, Refinery	- 6.50	- 6.50
Furnace Oil from Tank Wagons	- .11	- .11

fairly well and Pennsylvania 600 steam refined in barrels, New York, was 18 cents a gallon. Domestic demand for neutral oils and bright stock was more active last week.

Lubricating Oil—Gulf Ports

There was a report that a leading Independent refiner had booked a cargo of 40,000 barrels of assorted lubricating oils for May-June shipment to France but details and confirmation were lacking. There was an inquiry from the United Kingdom for 35,000 barrels of assorted lubricating oils but this did not materialize. The domestic demand has been lagging the past few days and prices are weakening.

Petrolatums

Snow white petrolatums was in better demand. Large manufacturers of toilet preparations are buying for the summer trade. Prices, however, were barely steady. Medicinal oils were in routine demand at unchanged prices.

Cities Service Launches Barge

BOSTON, MASS., April 29.—Cities Service Refining Co. of Massachusetts launched its third barge April 16. It was christened by Miss Mabel M. Cordell, daughter of John S. Cordell, vice-president and general manager of the company. This barge of steel construction has capacity for 12,000 barrels of oil and quarters for the crew. The hold is divided into eight compartments. Another barge has been ordered.

Crude Oil Prices, as Posted by Major

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District)	$2.90
Bradford District Oil in National Transit Lines (Bradford District)	2.90
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	2.80
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	2.80
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	2.75
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	2.60
Keister Grade in National Transit Lines (Butler Co.)	1.10
Cabell Grade in Eureka Pipe Lines (West Virginia)	1.40
Corning Grade in Buckeye Pipe Lines (Ohio)	1.45
Corning, O. heavy grade	1.35
*Somerset Oil in Cumberland Pipe Lines (Kentucky)	1.50
Ragland Grade in Cumberland Pipe Lines (Kentucky)	.95

*Somerset oil run prior to Oct. 1, 1922 takes price of 6 cents lower than above quotations.

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines	$1.50

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective March 14, 1927

Wooster	$1.77	Plymouth	$1.33
Lima	1.71	Western Kentucky	1.33
Waterloo	1.35	*Canadian Petrolia	2.11
Indiana	1.48	*Oil Springs	2.18
Princeton	1.60	*Posted by Imperial Oil Ltd.	
Illinois	1.60		

OKLAHOMA, KANSAS And NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma, Kansas, North and East Central Texas)

Effective March 12, 1927

28-28.9	$1.12	34-34.9	$1.24
29-29.9	1.14	35-35.9	1.26
30-30.9	1.16	36-36.9	1.28
31-31.9	1.18	37-37.9	1.30
32-32.9	1.20	38-38.9	1.32
33-33.9	1.22	39-39.9	1.34
40-40.9	$1.36	47-47.9	$1.50
41-41.9	1.38	48-48.9	1.52
42-42.9	1.40	49-49.9	1.54
43-43.9	1.42	50-50.9	1.56
44-44.9	1.44	51-51.9	1.58
45-45.9	1.46	52 and above	1.60
46-46.9	1.48		

Above schedule met on March 12, by Gulf, Mid-Continent Pet. Corp., and Empire; by Carter, Humble and the Texas Co. on March 14.

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

March 14, same schedule as Prairie in above fields except that Humble is paying 2c less for each degree of gravity on oil below 28°.

Mirando, Tex	$1.00

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

Effective April 20

Below 33	$ .95	43-43.9	$1.17
33-33.9	.97	44-44.9	1.19
34-34.9	.99	45-45.9	1.21
35-35.9	1.01	46-46.9	1.23
36-36.9	1.03	47-47.9	1.25
37-37.9	1.05	48-48.9	1.27
38-38.9	1.07	49-49.9	1.29
39-39.9	1.09	50-50.9	1.31
40-40.9	1.11	51-51.9	1.33
41-41.9	1.13	52 and above	1.35
42-42.9	1.15		
Corsicana heavy			$1.00

Carter Oil Co.

(Oklahoma and Kansas)

March 14, same schedule as Prairie.

PANHANDLE, TEXAS

Humble Oil & Refining Co.

Effective March 14

Hutchinson, and Carson Counties	$0.95

Gray and Wheeler Counties:

28-28.9	$ .80	37-37.9	$ .98
29-29.9	.82	38-38.9	1.00
30-30.9	.84	39-39.9	1.02
31-31.9	.86	40-40.9	1.04
32-32.9	.88	41-41.9	1.06
33-33.9	.90	42-42.9	1.08
34-34.9	.92	43-43.9	1.10
35-35.9	.94	44 and above	1.12
36-36.9	.96		

WEST TEXAS

(Crane, Upton and Crockett Counties)

Humble Oil & Refining Co.

Effective March 14

Below 26	$ .70	31-31.9	$ .82
26-26.9	.72	32-32.9	.84
27-27.9	.74	33-33.9	.86
28-28.9	.76	34-34.9	.88
29-29.9	.78	35-35.9	.90
30-30.9	.80	36 and above	.92

NORTH LOUISIANA—ARKANSAS FIELDS

***Prices of Standard Oil Co. of Louisiana Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton and De Soto**

Effective Mar. 14, 1927

Below 28	$1.10	40-40.9	$1.36
28-28.9	1.12	41-41.9	1.38
29-29.9	1.14	42-42.9	1.40
30-30.9	1.16	43-43.9	1.42
31-31.9	1.18	44-44.9	1.44
32-32.9	1.20	45-45.9	1.46
33-33.9	1.22	46-46.9	1.48
34-34.9	1.24	47-47.9	1.50
35-35.9	1.26	48-48.9	1.52
36-36.9	1.28	49-49.9	1.54
37-37.9	1.30	50-50.9	1.56
38-38.9	1.32	51-51.9	1.58
39-39.9	1.34	52 and above	1.60
Smackover, below 24			$1.00
do 24 and above			1.25
Bellevue			1.25
Cotton Valley			1.00
**Urania, La.			1.00
†East El Dorado			1.00

**Posted by Louisiana Oil Refining Corp.
†Posted by Magnolia Petroleum Co.

STEPHENS, ARKANSAS

Atlantic Oil Producing Co. and Louisiana Oil Refining Corp.

Below 28	$1.00	30-30.9	1.06
28-28.9	1.02	31-31.9	1.08
29-29.9	1.04	32 and above	1.10

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective March 14

Grades A	$1.20	29-29.9	$1.28
Grades B:		30-30.9	1.27
Below 25	1.15	31-31.9	1.29
25-25.9	1.17	32-32.9	1.31
26-26.9	1.19	33-33.9	1.33
27-27.9	1.21	34-34.9	1.35
28-28.9	1.23	35 and above	1.37

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling and Pierce Junction. All other fields are Grades A only.

Improvement in Local Markets Looked For in California

LOS ANGELES, April 30

RUMORS of a settlement of the gasoline price war in California, which has been in progress for several weeks, occupies principal attention this week.

The tank wagon price in Southern California has held at 8½ cents including two cent tax, with all companies except Union Oil Co., which has held to tank wagon price of 10½ cents including tax.

One gasoline purchaser this week placed orders for several tank cars of U. S. Motor with a local refinery to be moved at 5½ cents during May. If prices advance next week as expected, 5½ cents will be a very low price, and cannot be called the market. Others are quoting 6 to 7 cents f.o.b. refineries in tank cars. These prices are without tax.

It was reported this week that Pan American Petroleum Co. sold 2,000,000 barrels of fuel oil to Shell Co. for future delivery, but officials of interested companies failed to either affirm or deny the report. Neither is it known the price paid. The Shell Company is shipping considerable fuel oil in tankers to various ports outside of Pacific Coast trade territory. Fuel oil for export can be bought at 70 cents f.o.b. tankers.

No change in the prices and quotations of other petroleum products were noted during the past week, and a stiffening is expected rather than further reductions in prices.

Shipments from California ports during March to points outside Pacific Trade territory reached a total of 8,029,049 barrels, all products. This included 1,255,570 barrels of crude, 4,185,754 barrels of fuel, 1,932,317 barrels of gasoline.

The daily average production of gasoline in March in California was 152,495 barrels, indicating that, if shipments keep up, consumption, including shipments, will about equal production during April and May. Pacific Coast trade territory consumption during the best consumption months this summer will run around 100,000 barrels daily.

Motor Benzol More Active

NEW YORK, May 2.—Business in motor benzol was more spirited last week. There were many heavy contract withdrawals and with production falling the price was well maintained at 23 cents a gallon at the ovens. Most fresh buying orders, however, were for small quantities to take care of prompt requirements. Export inquiries for motor benzol were much more numerous and United Kingdom buyers are now negotiating for their late spring and summer requirements. Motor fuel blenders look for a record consumption of motor benzol this year.

Purchasers, in All Fields (in Effect, May 2, 1927)

GULF COASTAL

Prices of The Texas Co. (Effective March 14)

Grades A	$1.20	*Grades B	$1.15
‡Grades B (light crude):			
35-35.9	$1.37	38-38.9	$1.43
36-36.9	1.39	39-39.9	1.45
37-37.9	1.41	40 and above	1.47

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on oil below 35° is same as Humble's postings on Grades B.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co. and Midwest Refining Co.
(Salt Creek prices effective March 12)

‡Salt Creek	29-29.9	$1.14
" "	30-30.9	1.16
" "	31-31.9	1.18
" "	32-32.9	1.20
" "	33-33.9	1.22
" "	34-34.9	1.24
" "	35-35.9	1.26
" "	36-36.9	1.28
" "	37 and above	1.30
Elk Basin		1.33
Grass Creek light		1.33
Big Muddy		$1.23
Lance Creek		1.33
Rock Creek		1.23
Mule Creek		1.30
Rex Lake		1.10
‡Osage		1.33
‡Cat Creek, Mont		1.33
Sunburst, Mont		1.33
‡Hogback, N. Mex		1.33
Artesia, N. Mex		1.00

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

The Texas Co. buys Salt Creek and Big Muddy crude.

CALIFORNIA

Standard Oil Co. of California

Gravity	Signal Hill Seal Beach	Huntington Beach	Ingle-wood	Torrance	Whittier	Newhall, McKittrick, Kern La Habra	River	Olinda-Brea Canon, Richfield	Athens-Rosecrans Dominguez	Monte-bello	Coyote Hills	Midway Sunset Santa Fe Springs	Buen a Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria	Ventura
14-14.9	$ .85		$ .85		$ .85	$ .75		$ .85	.....	$ .85	$ .85	.....	$ .75	$ .75	$ .75	$ .75	$ .85	$ .85
15-15.9	.85		.85		.85	.75		.85	.....	.85	.85	.....	.75	.75	.75	.75	.85	.85
16-16.9	.85		.85		.85	.75		.85	.....	.85	.85	.....	.75	.75	.75	.75	.85	.85
17-17.9	.85		.85		.85	.75		.85	.....	.85	.85	.....	.75	.75	.75	.75	.85	.85
18-18.9	.85		.85		.85	.75		.85	.....	.85	.85	.....	.75	.75	.75	.75	.85	.85
19-19.9	.85		.85		.85	.75		.85	.....	.85	.85	.....	.75	.75	.75	.75	.85	.85
20-20.9	.85		.85		.85	.....		.85	.....	.85	.85	.....	.77	.77	.76	.78	.85	.85
21-21.9	.86		.86		.85	.....		.86	.....	.85	.86	.....	.79	.79	.77	.81	.85	.85
22-22.9	.87		.87		.85	.....		.87	.....	.85	.87	.....	.81	.81	.78	.85	.85	.85
23-23.9	.88		.88		.....	.....		.88	.....	.85	.88	.....	.83	.83	.79	.89	.85	.85
24-24.9	.89		.89		.....	.....		.89	$ .89	.85	.89	$ .85	.85	.85	.80	.93	.85	.85
25-25.9	.90		.90		.....	.....		.90	.90	.86	.90	.85	.87	.87	.81	.97	.86	.86
26-26.9	.92		.92		.....	.....		.92	.92	.87	.91	.85	.89	.89	.83	1.01	.87	.87
27-27.9	.94		.94		.....	.....		.94	.94	.88	.92	.85	.91	.91	.85	1.05	.88	.88
28-28.9	.96		.96		.....	.....		.96	.96	.89	.93	.86	.93	.93	.87	.....	.89	.89
29-29.9	.98		.....		.....	.....		.98	.98	.90	.94	.87	.96	.96	.89	.....	.91	.91
30-30.9	1.00		.....		.....	.....		1.00	1.00	.91	.95	.88	.99	.99	.91	.....	.93	.93
31-31.9	1.03		.....		.....	.....		.....	1.03	.....	.....	.89	1.02	1.02	.93	.....	.....	.95
32-32.9	1.06		.....		.....	.....		.....	1.06	.....	.....	.91	1.05	1.05	.95	.....	.....	.97
33-33.9	.....		.....		.....	.....		.....	1.09	.....	.....	.93	1.08	1.08	.97	.....	.....	.99
34-34.9	.....		.....		.....	.....		.....	1.12	.....	.....	.95	.....	1.11	.99	.....	.....	1.01
35-35.9	.....		.....		.....	.....		.....	1.15	.....	.....	.97	.....	.....	1.01	.....	.....	1.03
36-36.9	.....		.....		.....	.....		.....	1.18	.....	.....	.99	.....	.....	.....	.....	.....	1.06
37-37.9	.....		.....		.....	.....		.....	1.21	.....	.....	1.01	.....	.....	.....	.....	.....	1.09
38-38.9	.....		.....		.....	.....		.....	1.24	.....	.....	1.03	.....	.....	.....	.....	.....	1.12
39-39.9	.....		.....		.....	.....		.....	1.27	.....	.....	1.06	.....	.....	.....	.....	.....	1.15
40-40.9	.....		.....		.....	.....		.....	1.30	.....	.....	1.09	.....	.....	.....	.....	.....	.....
41-41.9	.....		.....		.....	.....		.....	1.33	.....	.....	1.12	.....	.....	.....	.....	.....	.....
42-42.9	.....		.....		.....	.....		.....	1.36	.....	.....	1.15	.....	.....	.....	.....	.....	.....

Santa Maria and Ventura Posted by Union Oil Co.

*Union Oil Co. also purchases Long Beach Crude and is maintaining the same gravity and price schedule in that field as the Standard maintains in Signal Hill and Huntington Beach fields. The Union also buys and pays the same prices as the Standard in the Rosecrans-Dominguez fields, on gravities ranging from 14 degrees to and including 24.9 degrees and in Santa Fe Springs, on gravities ranging from 20 to and including 25.9 degrees.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are the average market prices fo. the week on materials used by refiners and compounders f. o. b. shipping point as effective this date.

Refiners' Supplies

	May 2	Apr. 25
Soda Ash light 58% bags.cwt.	$1.325	$1.325
Silicate of Soda 60 deg. drums.....cwt.	$1.65	$1.65
Sal Soda wks.....cwt.	$0.90–1.10	90–1.10
Caustic Soda 76% solid.cwt.	$3.00	3.00
Chloride of Lime.....cwt. works.....	$2.00	2.00
Sulphuric Acid 60 deg. tank cars f. o. b. shipping point.....per ton	$10.50–11.00	10.50–11.00
Liquid Chlorine tank cars works.....lb.	4	4

Compounders' Supplies (Open Market)

Vegetable Oils—		
Linseed carloads spot....lb.	10.9	10.9
May	10.9	10.9
Tanks, spot	10.1	10.1
*Soya Bean Tanks, Coast.lb.	9.625	10
Castor Oil—		
No. 1 Carlots, Bbls	14.00	14.50
No. 3 Carlots, Bbls	13.50	14.00
Animal Oils—		
English Degras	5.75	5.75
Domestic Degras, bbls., carloads.....lb.	4.75	4.75
Oleic Acid—		
Dist. Bbls.....lb.	9.50–9.75	9.50–9.75
Saponified Bbls.....lb.	9.75–10	9.75–10
Lard Oils—		
Prime Winter Strained. 2 to 1½ffa.40-45c.t.lb.	15.00	14.75
Extra Winter Strained. 2 to 4½ffa. 40-45c.t.lb.	13.25	13.25
Extra..... 4 to 5 ffa. 40-45c.t.lb.	12.25	12.25
Extra No.1. 7 to 10 ffa. 40-59c.t.lb.	11.00	11.00
No. 1.....15 to 18 ffa. 40-45c.t.lb.	10.75	10.75
No. 2.....22 to 23 ffa. 40-45c.t.lb.	10.25	10.25
Prime Edible Tallow under 1½ffa. 40-45c.t.N.Y.....lb.	8.375	8.25
Tallow acidless.....lb.	10.50	10.50
Lard Stearine.....lb.	15.00	15.50
Oleo Stearine.....lb.	9.25	9.25
Neatsfoot Oil—		
Pure.....bbls.-lb.	12.75	12.75
Extra.....do lb.	11	11
No. 1.....bbls.-lb.	10.75	10.75
Cold pressed.....lb.	15.75	15.75
Fish Oils—		
Menhaden Oil Light pressed.....gal.	60	60
White.....gal.	66	66
Yellow bleached.....gal.	64	64
Whale, extra winter bleached.....gal.	82	82
Naval Stores—		
Turpentine, N. Y.....gal.	64	6.55
Turpentine†.....gal.	57.75	59
Rosin, B. N. Y.....bbl.	$ 9.50	$10.25
Rosin, F. N. Y.....bbl.	$10.50	$11.5
Rosin, B†.....bbl.	$7.50	$8.50
Rosin, F†.....bbl.	$8.75	$9.00
Rosin Oil 1st run.....gal.	57	57
Rosin Oil 2nd run.....gal.	62	62
Pine Tar—		
Kiln Burnt.....bbl.	$16.00	$16.00
Retort.....bbl.	$16.00	$16.00
Alcohol—Denatured—		
Formula 5 Bbls.....gal.	46.5	46.5
Drums.....gal.	39.5	39.5

†Savannah, Ga., market.
*Nominal.

Shell Union Sells Bonds to Retire Preferred

NEW YORK, April 30.—Recent issue of $50,000,000 Shell Union Oil Corp. 20-year 5 per cent sinking fund gold debentures have been oversubscribed. The price was 99½ to yield 5.04 per cent. The issue was underwritten by Lee, Higginson & Co.

The purpose of the issue, according to J. C. van Eck, president, in a letter to the bankers, is to retire the outstanding $16,965,400 6 per cent preferred stock, series A, on May 15 at 110 and to increase further the working capital. Mr. van Eck wrote this concerning the company's operations and earnings:

"Through its subsidiary companies it owns and operates oil properties having a total net production of approximately 100,000 barrels a day, and in 1926 a total net production for the year of 35,561,632 barrels; has refineries with a capacity of 180,000 barrels of crude petroleum a day and with a total intake of 39,580,000 barrels during the past year; owns or controls trunk and main pipe lines aggregating 1744 miles; and has concrete and steel storage capacity together amounting to more than 28,000,000 barrels. Sales in 1926 were in excess of $149,000,000.

"Net assets based on consolidated balance sheet giving effect as at Dec. 31, 1926, to this financing, after deducting all liabilities other than funded debt, were $285,004,854, or more than 570 per cent of this issue, constituting the corporation's total funded debt now to be outstanding. Total current assets of $90,959,333 were more than 5 times total current liabilities of $17,955,370. The corporation has no floating debt.

"Consolidated net earnings for the year, after depreciation, depletion and drilling charges and before Federal Income Taxes, available for interest, were $38,857,966 or more than 15½ times the $2,500,000 total interest requirement on this issue. For the five years since organization the average annual consolidated net earnings after depreciation, depletion and drilling charges and before Federal income taxes, available for interest, were $23,621,834 or approximately 9½ times this requirement."

Receivers Report Larger Middle States Income

NEW YORK, April 30.—A suit by J. Webster Manning to have a receiver appointed for the Middle States Oil Corp. in Delaware has been dismissed.

Income of the corporation, affiliated and associated companies in 1926 amounted to $2,270,904 compared with $1,986,788 in 1925, receivers Joseph Glass and Joseph P. Tumulty have reported. After payment of claims, interest, receivers' and counsel fees and other disbursements balance was $1,014,982, compared with $919,681 in preceding year.

Total claims filed against the company, amounting to $5,217,802 exclusive of government claims and claims in connection with security issues, were eliminated and reduced without payment to $2,970,218, and were further reduced by payment to $1,307,388, leaving balance remaining undisposed of $940,194 on Dec. 31, 1926.

Middle State's production averages slightly more than 10,000 barrels daily of which almost half comes from the Seminole district.

Socony Proposes Capital Increase

NEW YORK, April 30.—Stockholders of the Standard Oil Co. of New York will vote May 26 on a proposal to increase capital stock $12,500,000 to $450,000,000 to provide stock for sale to employes. The company announced that almost 50 per cent of eligible employes had subscribed to stock in previous purchase plans. Since the merger of the Magnolia Petroleum Co. and General Petroleum Corp. with the Standard of New York the number of employes eligible to subscribe to stock has been greatly increased.

Magnolia Crude Runs

HOUSTON, April 30.—Magnolia Petroleum Co., pipeline department, announces from Dallas headquarters the following crude oil runs for March, which are shown in comparison with February:

	February	March
Hewitt-Graham	136,642.67	161,637.79
Healdton	210,759.05	273,670.62
Cushing	211,502.99	208,533.93
Yale	63,037.94	69,931.53
Cement	23,386.45	26,781.04
Duncan	44,572.07	55,396.01
Augusta	42,757.08	49,571.01
Walters-Beaver Creek	8,404.21	9,763.71
Burbank	40,628.40	44,449.76
Wewoka	297,232.51	317,169.39
Bristow	.....	.....
Seminole	727,464.13	741,926.32
Total Okla.-Kans.	1,806,387.50	1,958,831.11
Archer	77,422.23	85,835.42
Burkburnett	71,192.68	80,526.76
Coleman	172.54	75.66
Comanche	19,878.66	22,227.59
Electra	95,920.84	119,713.89
Corsicana Heavy	7,685.67	7,107.79
Corsicana Light	24,189.21	31,109.41
Henrietta	4,929.00	5,365.68
Iatan	10,733.64	15,075.35
Luling	403,693.51	445,500.57
Lytton Springs	48,570.16	51,872.71
Mexia-Wortham	41,886.05	52,080.07
Mirando	126,271.60	131,931.54
Olden	13,681.21	15,841.06
Panhandle	301,965.50	278,824.24
Panola	267.64	602.20
Stephens	9,551.90	11,508.78
Thrall	1,431.39	1,290.50
Gulf Coast	31,191.11	94,856.13
Total Texas	1,290,634.54	1,451,345.35
Haynesville	3,804.90	4,798.02
Bull Bayou	33,195.34	35,193.13
Cotton Valley	35,008.06	40,092.17
Pine Island	37,277.53	38,063.56
Total Louisiana	109,285.83	118,146.88
El Dorado Light	27,762.81	31,329.18
East El Dorado	1,775.64	3,386.40
Smackover	136,747.82	142,392.31
Total Arkansas	166,286.27	177,107.89
GRAND TOTAL	3,372,594.14	3,705,431.23

OKLAHOMA—KANSAS

Report For March		Daily Average
Runs	1,958,831	63,188
Shipments	1,260,525	40,662
Total Stock	4,585,518	

TEXAS

Wichita, Wilbarger, Archer	Runs	367,645	11,860
	Shipments	323,043	10,421
Petrolia	Runs	5,366	174
	Shipments	5,366	174
Eastland, Stephens	Runs	49,577	1,599
	Shipments	245,158	7,908

TOTAL STOCK—528,404—North Central Texas Field

Plymouth Nets $8.50 on $5 Shares

PITTSBURGH, April 30.—Plymouth Oil Co. reports net profits of $8,925,281 in 1926 after all charges and reserves. This amount was equivalent to $8.50 a share on the 1,050,000 shares of $5 stock outstanding. The company paid out $4,987,500 in dividends last year. The condensed income account for the year follows:

Gross	$14,716,323
Expenses	4,027,089
Balance	$10,689,234
Depletion	320,474
Depreciation	548,998
Federal taxes	894,481
Net profit	$8,925,281

Doheny Earnings Fall

NEW YORK, April 30.—Pan American Western Petroleum Co., owned by the E. L. Doheny interests netted $1,164,624 in 1926 after all charges, or $2.33 a share on the combined 500,000 shares of A and B common stock outstanding. In 1925 net earnings totaled 4,232,609. or $8.46 a share. The company recently passed its dividend. Consolidated income accounts for the last two years compare:

	1926	1925
Gross	$34,683,046	$28,583,179
Operating other costs	26,562,164	19,150,428
Operating profit	$ 8,120,882	$ 9,432,751
Depreciation, deplet.	3,661,153	2,940,675
Abandonment of prop.	749,188	648,370
General, admin. expenses	745,275	700,048
Interest	1,752,802	528,125
Federal taxes	47,820	382,924
Net profit	$ 1,164,624	$ 4,232,609

Fred G. Clark Co. Elects

CLEVELAND, April 30.—At the annual meeting of the Fred G. Clark Co., Cleveland, these directors were elected: Fred G. Clark, Elton Hoyt II, Sydney S. Wilson, J. J. McNerney, A. H. Beddell, W .A. Daley, and Latham W. Murfey. Mr. Clark was re-elected president. Mr. McNerney was elected vice-president, C. S. Dangler vice-president and treasurer, and Floyd D. Davis secretary. At the annual meeting of the Conewango Refining Co., controlled by the Clark company, these directors were elected: Mr. Clark, Harry R. Lewis, Phillip H. Collins, Frank W. Bishop and Mr. Davis.

Joplin Oil Expanding

JOPLIN, MO.—Capitalization of the Joplin Oil Co. here was increased from $100,000 to $200,000 recently, shares being $25 each. Officers are: Mercer Arnold, president; E. A. Martin, vice president; Cris Ogden, secretary, and C. B. Hood, treasurer and general manager.

The company operates four bulk stations, 25 service stations, and is now building several additional stations, according to Mr. Hood. Headquarters are at Joplin.

Transactions In Oil Shares on New York Stock Exchange

1926 High	1926 Low	1927 High	1927 Low		Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended April 30 Sales	First	High	Low	Last	Ch'ge
82⅛	24¼	87⅝	27⅝	(sh)	814,800	N.P.	Amerada Corp.	50cQ	Jan. 31, 27	14,700	29	29	† 27⅝	27¾	—1⅜
74	39⅜	60½	35⅛	(sh)	200,000	N.P.	American Republics	.....	.....	1,000	45	47⅛	45	45	—4⅜
59½	44¾	50¼	46	$	56,000,000	$ 25	Associated Oil	50cQ	Mar. 25, 27	.....	.....	.....	.....	.....	.....
128⅜	97	117⅜	107		50,000,000	100	Atlantic Refining	.....	June 16, 24	8,000	110	112	107⅝	108⅜	+ ⅜
120	115½	118	115½		20,000,000	100	do pfd.	$1¾Q	May 2, 27	100	117	117	117	117	0
55½	25½	55½	23⅛		25,000,000	25	Barnsdall Corp. A	62½cQ	Apr. 5, 27	38,500	27½	27½	† 23⅜	24	— 3½
49½	22½	32¼	22		8,715,775	25	do B	62½cQ	Apr. 5, 27	3,500	24½	24½	† 22	23	— 3
58⅛	29¼	32⅜	21½		47,709,175	25	California Petroleum	50cQ	Mar. 1, 27	45,800	24½	24⅜	† 21½	23⅜	—⅝
94¾	50	98¾	72½		25,721,200	100	General Asphalt	.....	.....	58,400	85½	83¾	† 72½	73¾	—10¼
140½	94⅞	144⅞	113		7,294,000	100	do pfd.	$1¾Q	Mar. 1, 27	1,000	120½	120½	†113	114¾	—10¾
72	50¾	124¾	60¼		25,000,000	100	Houston Oil	.....	.....	112,300	114	119⅞	107½	116	+ 1¾
84	19⅝	32¾	18	(sh)	500,000	N.P.	Independent Oil & Gas	25cQ	Apr. 18, 27	27,600	21	21	† 18	18⅝	— 2⅞
18¾	7¾	11⅞	7¾	$	3,283,960	$ 10	Indian Refining	.....	Dec. 15, 20	2,300	8½	8½	8	8	— 1
12½	8	10⅞	7½		4,546,490	10	do ctfs.	.....	.....	5,600	8½	8½	† 7½	7½	— 1⅜
104	90	112	102		2,296,400	100	do pfd.	.....	Dec. 15, 21	.....	.....	.....	.....	.....	.....
¼	¼	.....	.....		1,644,760	10	Kansas & Gulf	.....	.....	.....	.....	.....	.....	.....	.....
24½	19⅜	32½	20½	(sh)	3,983,629	N.P.	Lago Oil & Transport	75cQ	May 1, 27	17,800	26½	27½	25	25⅝	— 3
19⅞	12	18¾	12½	(sh)	1,184,258	N.Pl.	Louisiana Oil Refining	.....	.....	17,500	13	13	† 12½	12½	— ½
98	98	97	90	$	4,000,000	$100	do pfd.	$1¾Q	Feb. 15, 27	100	91½	91½	91½	91½	+ ½
28⅞	16½	22¾	13¾	(sh)	330,000	N.P.	Maracaibo Oi	.....	.....	5,000	15⅛	15¼	† 13¾	14	— 1⅜
58⅜	49¾	58½	36	(sh)	1,928,408	N.P.	Marland Oil Co.	$1Q	Dec. 31, 26	226,200	37¼	38¾	† 36	36⅞	— 1⅝
.....	.....	.....	.....	$	45,942,800	$100	Mexican Petroleum	$5Q	Apr. 20, 27	10	200	200	200	200	0
.....	.....	.....	.....		12,000,000	100	do pfd.	$2Q	Apr. 20, 27	.....	.....	.....	.....	.....	.....
15¾	6	9¼	5¾	(sh)	945,939	N.P.	Mexican Seaboard	.....	Nov. 15, 24	4,900	6¾	6¾	† 5¾	5¾	— 1⅜
87	27½	39⅜	29	(sh)	1,357,800	N.P.	Mid-Continent Petroleum	75cQ	May 1, 27	38,500	31½	31¾	† 29	29½	— 2¾
104¼	90	105	97	$	6,718,000	$100	do pfd.	$1¾Q	Mar. 1, 27	400	100½	100½	† 97	97	— 4¾
2½	¾	3⅛	1⅝		25,415,540	10	Middle States	.....	July 1, 25	17,600	2¾	2¾	2⅜	2½	— ⅛
1⅜	½	2¼	1⅜		4,384,680	....	do ctfs.	.....	.....	1,100	1⅝	1¾	1⅝	1⅝	+ ⅛
2¼	1	1⅞	1¼	(sh)	3,500,000	N.P.	Pacific Oil	.....	Jan. 20, 26	5,100	1¼	1⅜	1¼	1¼	0
76½	56½	65⅞	56½	$	48,307,400	$ 50	Pan American P. & T.	$1.50Q	Apr. 20, 27	1,500	57⅛	58½	57	57	— ⅜
78¾	56⅞	66¾	56¾		100,546,350	50	do B	$1.50Q	Apr. 20, 27	38,800	57⅜	59½	56⅝	57½	— ¾
46	30	37⅞	19	(sh)	400,000	N.P.	Pan American Western B	.....	Jan. 30, 27	4,900	20⅜	20⅞	19⅝	20½	0
12	4½	18¾	8	(sh)	198,770	N.P.	Panhandle P. & R.	.....	.....	1,200	8¾	8¾	† 8	8¼	— ⅜
90⅜	51	81¼	68½	$	2,935,200	$100	do pfd.	.....	July 2, 23	.....	.....	.....	.....	.....	.....
47⅜	40	60¼	39¾	(sh)	2,406,796	N.P.	Phillips Petroleum	75cQ	Apr. 1, 27	341,100	42¼	43⅜	† 39¾	41¼	— 1⅝
1⅞	⅝	¾	½	$	29,622,925	$ 25	Pierce Oil Corp.	.....	.....	2,000	⅝	¾	⅝	⅝	0
27⅛	11⅜	18⅝	13½		15,000,000	100	do pfd.	.....	Feb. 1, 22	1,700	18½	* 18½	18	18⅛	+ ⅛
7	2¾	3⅞	2½	(sh)	2,500,000	N.P.	Pierce Petroleum	.....	.....	8,000	3¼	3⅜	3⅛	3⅜	+ ⅛
20¾	11	32	16¾	$	11,467,850	$ 50	Producers & Refiners	.....	Sept. 15, 23	72,400	25	29½	24	27⅜	+ 2⅜
41¾	30¾	50	30⅞		2,845,350	50	do pfd.	.....	May 1, 25	1,380	41½	45¾	41½	44	+ 2¾
81	25¾	33½	26		75,959,250	25	Pure Oil Co.	87½cQ	Mar. 1, 27	29,200	27	27⅛	† 26	26¾	— ¼
112¾	106	113	111¾		13,000,000	100	do 8% pfd.	$2Q	Apr. 1, 27	200	112⅝	112⅝	112⅝	112⅝	— ⅛
57⅜	47⅜	58	48½	(sh)	646,502	13.40	Royal Dutch, N. Y. shares	$1.33¾	Jan. 28, 27	1,700	49¾	49¾	† 48½	49	— ¾
40⅜	40½	47⅜	43⅝	(sh)	86,962	£2	Shell Transport & T.	96.7c	Jan. 17, 27	200	43⅝	43⅝	† 43⅝	43⅝	— ⅝
31	24	31¾	25	(sh)	10,000,000	N.P.	Shell Union Oil	35cQ	Mar. 31, 27	25,000	27¾	27¾	† 25	26⅞	— ⅞
114	103	111	107½	$	18,350,400	$100	do pfd.	$1¾Q	Feb. 15, 27	100	111	111	111	111	0
28⅝	15⅛	22⅜	17¼		7,208,080	10	Simms Petroleum	37½cQ	Apr. 1, 27	12,700	18⅛	18½	† 17¼	17⅜	— ⅜
24⅞	16¾	22⅜	16½	(sh)	4,500,782	N.P.	Sinclair Consolidated	.....	May 31, 24	46,300	17¼	17⅜	† 16½	16¾	— ⅛
99½	90	103¼	97	$	17,210,000	$100	do pfd.	$2Q	Feb. 15, 27	900	99¾	100	99¾	100	0
37⅛	20⅝	37⅜	25		27,396,590	25	Skelly Oil Co.	50cQ	Mar. 15, 27	41,100	27¼	27⅞	† 25	25½	— 1¾
63⅝	52⅝	60¾	50⅜	(sh)	13,016,434	N.P.	S. O. California	62½cQ	Mar. 15, 27	83,600	53⅜	53½	† 50⅜	52⅜	— 1¾
46⅜	37⅜	41⅜	35⅜	$	517,397,550	$ 25	S. O. New Jersey	25cQ	Mar. 15, 27	38,600	36¼	36⅜	† 35⅛	35⅜	— ⅞
119⅛	115	116¼	114⅝		206,958,970	100	do pfd.	$1¾Q	Mar. 15, 27	.....	.....	.....	.....	.....	.....
33¼	32½	34⅛	30⅜		419,028,275	25	S. O. New York	40cQ	Mar. 15, 27	32,300	30⅝	30⅜	† 30⅛	30⅛	— ⅜
41⅝	30⅜	34⅞	30	(sh)	1,105,384	N.P.	Sun Oil	25cQ	Mar. 15, 27	3,600	32½	32½	30¾	31⅞	— ¾
5¼	1	6½	3¾	(sh)	1,121,368	N.P.	Superior Oil Corp.	.....	Dec. 20, 20	18,300	4⅜	4⅜	4	4¼	— ⅛
58	48	58	51	$	16,328,725	$ 25	The Texas Co.	75cQ	Dec. 30, 26	.....	.....	.....	.....	.....	.....
57¾	38⅜	58	45		141,467,575	25	The Texas Corp.	75cQ	Apr. 1, 27	31,600	45⅜	46⅜	45	45⅝	— ⅜
19½	12	16⅜	12		8,380,340	10	Texas Pacific Coal & Oil	15cQ	Mar. 31 27	17,700	13⅜	13⅜	† 12	12⅜	— 1⅛
89¼	37	29½	28⅜	(sh)	2,157,991	N.P.	Tide Water Oil Co.	37½cQ	Mar. 31, 27	.....	.....	.....	.....	.....	.....
108	87¼	89¾	87	$	20,705,100	$100	do 5% pfd.	$1.25Q	Feb. 15, 27	300	89¾	* 89¾	89	89	— ½
5½	3	5	3¾	(sh)	3,742,029	N.P.	Transcontinental Oil	.....	.....	27,500	3⅞	4⅛	† 3¾	3¾	— ⅛
58⅜	37¾	56½	39¾	$	40,690,650	$ 25	Union Oil of California	50cQ	Feb. 10, 27	44,400	40¾	42⅜	39⅝	41⅞	+ 1⅜
120¾	84¾	112¾	94		30,734,000	100	Union Tank Car Co.	$1¾Q	Mar. 1, 27	300	107¾	107¾	106	106	— 2
29¾	25⅛	27½	22	(sh)	490,000	N.P.	White Eagle Oil & Refining	50cQ	Apr. 20, 27	4,600	23½	23½	† 22	22¼	— 1¼

*New High †New Low xEx-Dividend Total Sales 1,586,190

Cleveland Stock Market

April 29

	Par	Bid	Asked	Last Sale
Canfield Oil Co.	$100	.....	.....	110
do pfd.	100	.....	100	100
Fred G. Clark Co.	10	3¼	4	2½
National Refining Co.	25	x35½	36	36
do pfd.	100	132	133	130
Paragon Refining Co.	25	6	6⅜	6
do pfd.	100	66½	66½	71

xEx-dividend

Oil Dividends

	Amt.	Payable	Stock of Record
Cities Service m	½%	June 1	May 15
do stock m.	½%	June 1	May 15
do pfd. m.	½%	June 1	May 15
do pfd. B m.	½%	June 1	May 15
Gen. Asphalt pfd. q	$1.25	June 1	May 16
Pure Oil q.	87½c	June 1	May 10
do extra	12½c	June 1	May 10
S. O. Ohio pfd. q	$1.75	June 1	Apr. 29
Swan-Finch pfd. q	$1.75	June 1	May 10

California Petroleum Corp.—Application made to list $14,562,500 additional capital stock, par $25 a share, on New York Stock Exchange.

Warner-Quinlan Co.—Application made to list 350,000 no par shares on New York Stock Exchange.

PITTSBURGH STOCK EXCHANGE

1926 High	1926 Low	1927 High	1927 Low	Par Value	Stocks	Transactions Week Ended Apr. 29 Sales	First	High	Low	Last	Ch'ge
8½	6⅝	.....	.....	N.P.	Andes Petroleum	.....	.....	.....	.....	.....	.....
8½	5¾	8¾	6⅞	$ 10	Arkansas Nat. Gas.	3,804	7¾	7¾	6⅞	6⅞	— ⅜
90½	79¾	96½	84	100	Columbia Gas.	617	94¾	94¾	90	90	—4
101¾	95	105½	100	100	do pfd.	101	104	104	104	104	— ½
17	12½	15	10	10	Devonian Oil	100	10	10	†10	10	—1
116½	112	116⅝	115	100	Duquesne Lt. 7% pfd.	10	116⅝	*116⅝	116⅝	116⅝	+1¾
10	5⅛	12¾	6	N.P.	Houston Gulf Gas.	980	10¼	10¾	9¾	10⅛	— ⅜
46	39	46¾	37¼	$ 25	Lone Star Gas.	3,985	42¾	43	41¾	42⅝	— ¾
47¾	33½	.....	.....	25	Ohio Fuel Corp.	.....	.....	.....	.....	.....	.....
47½	42	21¾	21	....	do ctfs.	.....	.....	.....	.....	.....	.....
6¾	5	6	6	....	Ohio Oil & Gas.	.....	.....	.....	.....	.....	.....
34	21	21	21	25	Oklahoma Nat. Gas.	.....	.....	.....	.....	.....	.....
21	19¼	23	20¼	....	do ctfs.	.....	22½	22¾	22	22	— ½
5¾	3½	3⅞	3¾	5	Pittsburgh Oil & Gas.	.....	.....	.....	.....	.....	.....
10	7½	8	6½	10	Salt Creek Cons.	450	6¾	6⅞	†6½	6¾	— ¼
27	8	26½	17	10	Tidal Osage	1,650	20¼	20¼	†17	17	—7
45	40	48	41	N.P.	Waverly Oil Wks. "A"	370	42½	42½	42½	42½	0

*New high †New low

PITTSBURGH CURB MARKET

1926 High	1926 Low	1927 High	1927 Low	Par Value	Stocks	Transactions Week Ended Apr. 29 Sales	First	High	Low	Last	Ch'ge
3⅜	2¼	3½	2¾	$ 5	Colombia Synd.	.....	.....	.....	.....	.....	.....
.20	.06	.18	.18	5	Duquesne Oil	.....	.....	.....	.....	.....	.....
22	22	.....	.....	10	Forest Oil	.....	.....	.....	.....	.....	.....
91½	85	94	88	25	Gulf Oil Corp.	.....	.....	.....	.....	.....	.....
79	79	97	93	100	Houston Gulf Gas pfd	.....	.....	.....	.....	.....	.....
12	7½	10¾	7¾	N.P.	Leonard Oil & Dev.	.....	.....	.....	.....	.....	.....
1⅝	1⅝	.....	.....	N.P.	Mountain & Gulf	.....	.....	.....	.....	.....	.....
30¼	29	32	31¼	$ 25	Oklahoma Gas.	.....	.....	.....	.....	.....	.....
.....	.....	1.20	1.00	....	Oklahoma Eastern.	2,300	1.20	1.20	1.00	1.20	—.25
2	.15	2.70	1.25	10	Omar Oil & Gas.	.....	.....	.....	.....	.....	.....
.....	.....	2¼	2¼	....	Pittsburgh Oil Dev.	200	2	2 †	2	2	.....
2	1¼	2¼	2¼	5	Do Pfd.	100	2¼	2¾	2¾	2¼	0
33½	20	31	24	10	Plymouth Oil.	295	25	25	†24	24	—1
7	3	6	5½	5	States Oil.	.....	.....	.....	.....	.....	.....
3½	2	3¼	2½	1	Texon Oil & Land.	2,600	2½	2¾	2½	2½	0
25¾	8	23¾	20½	10	TidalOsage(non-vtg).	.....	.....	.....	.....	.....	.....

†New High Record xEx-Dividend ‡Ex-Rights

Standard Oil Stock Traded in New York

1926 High	1926 Low	1927 High	1927 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Apr. 29 Sales	First	High	Low	Last	Ch'ge
21	16¾	21¾	18½	£ 4,000,000	£ 1	Anglo-American Oil	60¾cS.A.	May 27, 26	2,500	19¾	19¾	18¾	18¾	— ⅝
20¼	16½	20½	17⅞	.....	£ 1	do ctfs. non-voting	.....	.....	300	.....	18⅝	17⅞	18	— ¾
19	16	20½	18¾	.....	£ 1	do voting ctfs	.....	.....	.....	.....	.....	.....	.....	.....
2¼	.75	1¼	1	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	300	1⅛	1⅛	1⅛	1⅛	0
5	2⅞	4¼	2¾	$ 10,000,000	$ 10	do pfd	.....	.....	100	2¾	2¾ †	2¾	2¾	— ⅛
75	65	69	50	1,000,000	25	Borne Scrymser	$1S.A.	Apr. 15, 27	50	50	50	50	50	— 1
59½	42	52	45	10,000,000	50	Buckeye Pipe Line	$1Q	Mar. 15, 27	500	50	50	49	49½	— 1
82¾	65	95	76½	3,000,000	25	Chesebrough Mfg	$1Q	Mar. 31, 27	600	90¼	* 95	90¼	92	+ 3½
25⅞	17½	22⅝	17⅝	35,051,920	10	Continental Oil	30cQ	Mar. 15, 27	20,600	18½	18½ †	17⅝	17¾	— ¾
17	13½	.....	.....	1,500,000	25	Crescent Pipe Line	.....	Sept. 15, 23	.....	.....	.....	.....	.....	.....
137	102	137	89	3,000,000	100	Cumberland Pipe Line	$2Q	Mar. 15, 27	120	.....	94	91½	91½	— 2½
63¾	43	55	47	5,000,000	100	Eureka Pipe Line	$1Q	May 2, 27	300	52	53½	52	52½	— 1
32½	9⅛	13½	10	2,000,000	100	Galena Signal Oil	.....	June 30, 25	100	11	11	11	11	+ ½
94½	35	59¾	38	4,000,000	100	do new pfd	.....	June 30, 26	150	38½	38½ †	38	38	— 12
97½	40	60⅛	48¼	2,000,000	100	do old pfd	.....	June 30, 26	.....	.....	.....	.....	.....	.....
99⅜	52	62¾	54	72,916,666	25	Humble Oil & Refining	30cQ	Apr. 1, 27	18,400	58¼	59¼	56½	57	— 1¾
144½	125¼	145½	123¾	20,000,000	100	Illinois Pipe Line	$6S.A.	Dec. 15, 26	1,050	141¼	142½	139	140¼	— 1¾
39¾	32½	47	37¾	(sh) 6,491,952	N.P.	Imperial of Canada	25cQ	Mar. 1, 27	10,700	44⅞	45	42½	43½	— 1
70	54¼	69½	61	$ 5,000,000	$ 50	Indiana Pipe Line	$1Q	Feb. 15, 27	50	66	66	66	66	— ½
35¼	28¾	34⅞	30	(sh) 7,118,138	N.P.	International Petroleum	25c	Nov. 15, 26	11,800	31⅛	31¼ †	30	30½	— ⅝
20¾	12½	15¼	13½	$ 6,362,500	$12½	National Transit Co	25cQ	Mar. 15, 27	2,500	14¼	* 15½	14¼	15½	+ 1¼
51½	27⅛	36	31¼	5,000,000	100	New York Transit	.....	July 15, 26	200	32½	33	32	32	— 1
80½	64	80	70	4,000,000	100	Northern Pipe Line	$3S.A.	Jan. 1, 27	100	75½	75½	75½	75½	— ½
67¾	55¾	64¼	52	60,000,000	25	Ohio Oil Co	50cQ	Mar. 15, 27	6,800	55⅜	55⅜ †	52	53¾	— 1⅞
24¾	15	19	12	10,000,000	25	Penn Mex Fuel	.....	May 21, 25	200	16	16	15½	15½	— ½
60¼	48	55½	45⅝	60,000,000	25	Prairie Oil & Gas	50cQ	Nov. 30, 26	16,600	47⅛	47¾	†45⅝	46	— 1
137½	122¼	165⅝	132	81,000,000	100	Prairie Pipe Line	$2.50Q	Apr. 30, 27	5,650	162	165	157¾	163½	+ 7½
220	184½	201½	180	4,000,000	100	Solar Refining	$5S.A.	Dec. 20, 26	60	184	185	†180	185	+ ½
27	21	27¼	15½	5,000,000	50	Southern Pipe Line	.....	Mar. 1, 26	.....	.....	.....	.....	.....	.....
50	34½	41½	34½	20,000,000	25	South Penn Oil	50cQ	Mar. 31, 27	600	36⅝	36⅝ †	34½	34½	— 1¾
57	49	68	55½	3,500,000	100	South West Pa. Pipe Lines	$1Q	Apr. 1, 27	100	68	68	68	68	0
70½	60½	74¼	64⅞	226,322,708	25	S. O. Indiana	62½cQ	Mar. 15, 27	61,700	66	66 †	64⅜	65¼	— ⅞
36½	16½	20⅞	15⅝	8,000,000	25	S. O. Kansas	.....	June 16, 24	1,800	17	17	16¼	16¼	— 1
134¾	108	122¼	112	16,929,809	25	S. O. Kentucky	$1Q	Mar. 31, 27	1,600	113⅞	113⅞	112	113	— ½
51⅛	42	49½	45¼	4,518,600	25	S. O. Nebraska	63cQ	Mar. 21, 27	600	46	† 45½	45½	— 1⅝
67¤	288	86	73	14,000,000	25	S. O. Ohio	$2½Q	Apr. 1, 27	1,700	84½	84½	78½	78½	— 6½
120¼	116½	122	117¼	7,000,000	100	do pfd	$1¾Q	Mar. 1, 27	30	119¼	119¼	117¼	117¼	— 2
23	15½	17⅝	14½	861,466	25	Swan Finch Co	.....	Nov. 1, 19	150	16½	16½	16	16	— ½
109¾	90¼	116½	95⅛	62,199,950	25	Vacuum Oil	50cQ	Mar. 19, 27	10,900	111⅛	114¾	110	112	+ ½

NEW YORK BONDS

Week Ending Apr. 29

	High	Low	Last	Ch'ge
Amer. Rep. Deb. 6s	99¾	99¾	99¾	+ ¼
Assoc. Oil gold 6s	103¾	102⅝	102⅝	— ⅜
Atlantic Refg. deb. 5s	101⅝	101	101⅛	+ ⅛
Barnsdall Corp. 6s	100	96¼	97	—2¾
Barnsdall Corp. 6s ex war.	91½	89½	89½	—2⅛
Cal. Petrol 5s	93⅞	92	92	—3¾
Cal. Petrol 5½s	98	97⅝	97⅞	— ⅛
Empire Gas & Fuel 7½s	109¾	108¾	109¼	+ ¼
Empire Gas & Fuel 6½s	105	104½	104½	0
Gen. Asphalt 6s	108	106	106	—2
Gen. Petroleum 5s	100¾	100⅝	100¾	0
Humble Oil & Refg. 5½s	102⅝	102¼	102¼	— ⅛
Humble Oil 5s wi	100¼	97	98⅝	—1⅝
Mid-Cont. Pet. 6½s	104¾	104	104¼	— ⅝
Pan-Amer. P & T 7s	105⅛	105	105⅛	0
Pan-Amer. P & T 6s	93¼	92	93	0
Pan-Amer. P & T 6s	103¼	102½	103	0
Prod. & Refnrs. 8s	111	110¾	110¾	0
Simms Pet. cvt 6s	100½	99¾	100	— ⅛
Sinclair Con. Oil Col. 7s	100	99⅛	99⅞	— ⅛
Sinclair Con. Oil Con. 6½s	96⅝	95½	95½	—1
Sinclair Con. Oil 6s	100	99⅞	99⅞	0
Sinclair Crude Oil 6s	100¾	100	100	— ⅛
Sinclair Pipe Line sf 5s	93¾	92¾	93	— ⅛
Standard Oil N. Y. 4½s	95⅝	95½	95¾	— ⅛
Standard Oil N. J. deb. 5s	102¼	102	102	0
Superior Oil 7s	100½	100	100¼	+ ¼
Union Oil of Cal. 6s-A	108	108	108	0
Union Oil of Cal. 5s-C	98½	97⅞	97⅞	— ⅜

NEW YORK CURB BONDS

Week Ending Apr. 29

	High	Low	Last	Ch'ge
Beacon Oil 6s '36	102½	100⅝	101⅞	+ ⅞
Cities Serv. 5s '56	91⅞	91¾	91¾	0
Cities Serv. 6s '66	101⅜	101	101	— ⅜
Galena S. O. 7s '30	91	90¾	90¾	— ½
General Pet. 6s '28	101	101	101	0
Gulf Oil 5s '37	100⅝	100¼	100¼	— ¼
Gulf Oil P. 5s '47	100	99½	99⅝	— ⅜
Gulf Oil 5½s '28	100½	100½	100½	— ⅜
Indepen. Oil 6½s '31	103	102¾	103	0
Indepen. Oil 6s	99	99	99	0
Pure Oil 6½s '38	103⅝	103¼	103½	+ ¼
Richfiled Oil 6s wi '41	95¼	94¼	94¼	— ⅞
Skelly Oil 5½s	98½	98½	98½	0
Shell Union Oil 5s	99½	99⅜	99⅜	— ⅛
S.O. N. Y. 6½s '33	105	104¾	104¾	— ¼
Sun Oil 5½s '39	100	99⅞	99⅞	0
Trans. Cont. Oil 7s '30	98¾	98¼	98⅛	— ⅜
United Oil Prod. 8s '31	80⅝	76	76	—4
Valvoline 7s '37	106	106	106	0

Cities Service Co.—M. H. Aylesworth elected director. Other directors re-elected.

Superior Oil Corp.—G. C. Harned, John H. Stone, and J. R. Neison elected directors.

New York Curb Market

1926 High	1926 Low	1927 High	1927 Low	Par Value	Stocks	Transactions Week Ended April 29 Sales	First	High	Low	Last	Ch'ge
6¾	.45	2⅛	.76	$5	Amer. Con. Oilfields	18,900	106	106	87	91	— 9
14½	4	7½	4	N.P.	Amer. Maracaibo	10,600	5⅜	5½	4⅝	4⅝	— 1
8¾	5¾	8¾	6¾	$10	Arkansas Nat. Gas..	3,800	7⅝	7⅝ †	6¾	6¾	— ⅛
20¾	14¾	20¼	15½	N.P.	Beacon Oil	3,400	16⅛	17¼	16	16¾	0
85¼	60	97	20½	N.P.	British American						
28¾	9¼	28¼	15½	25c	Carib Syndicate	4,200	16¾	16⅞	15⅞	16	0
.....	.....	26	18½	....	do ctfs. of deposit	100	16¾	16¾	16¾	16¾	0
51	37½	58¾	40¼	$20	Cities Service	132,000	51½	51⅝	41	45⅜	— 6½
92½	82¾	92¼	87	100	do pfd	5,000	89⅝	89⅞	89	89⅞	+ ⅛
8¾	7¼	8½	7¼	10	do pref. B	700	.....	8¼	8⅛	8⅛	0
25¼	19	29¼	25½	10	do bankers' shares	.....	.....	.....	.....	.....	.....
3½	1¾	3⅞	1¾	$1	Colombia Syndicate	21,100	2 3/16	2½	1 11/16	2 1/16	— 1/16
10⅛	8⅛	9⅝	8⅝	10	Consolidated Royal	.....	.....	.....	.....	.....	.....
16	10	14⅞	10¾	N.P.	Creole Syndicate	37,900	12¼	12⅜ †	10¾	11	— 1⅛
7⅜	1¼	8	1½	N.P.	Crown Central	8,300	1½	1⅝ †	1¼	1¼	— ⅛
8½	½	12	4¼	....	Darby Petroleum	1,200	.....	10½	8⅞	10⅝	+ ⅛
.....	.....	11½	8	....	do trust ctfs	300	.....	9¾	9	9¾	0
4	1¾	2½	1¾	N.P.	Derby Oil & Refining	.....	.....	.....	.....	.....	.....
19	13	16¾	10	N.P.	do pfd	500	14¾	16¾	14	14	+ 3
7½	2½	3¾	1⅝	N.P.	Gibson Oil	10,000	1⅞	1⅞	1⅝	1¾	— ⅛
2	.63	1¾	40	N.P.	Gilliland ctfs	500	66	66	66	66	+15
98	82	96½	87½	$25	Gulf Oil Corp	300	88	88	88	88	—
3⅜	1	2¾	1¼	N.P.	Kirby Petroleum	1,800	.....	1¾	1½	1½	— ⅛
12¼	5¾	10⅞	7⅛	N.P.	Leonard Oil & Dev.	10,000	7¾	7¾ †	7⅛	7⅜	— ⅛
27	20	27½	22	N.P.	Lion Oil & Refg	2,000	23¼	23¼ †	22	22⅞	— ⅛
46	31	46½	37	$25	Lone Star Gas	1,300	42¾	42¾	42	42	— ⅛
2¾	2	2¾	1¾	1	Magdalena Synd	3,800	.....	2	1¾	1⅞	0
5½	1¾	8	1½	10	Mexican-Panuco	.....	.....	.....	.....	.....	.....
1¾	1¾	1½	1¾	1	Mountain & Gulf	.....	.....	.....	.....	.....	.....
26	23	26⅞	22¾	10	Mountain Producers	15,000	24¼	24¼ †	22¾	23	— 1⅛
6¾	5	5⅞	4⅞	5	New Bradford	2,300	5¼	5¼	5	5	— ⅛
11¾	2	6¾	4	10	New England Fuel	400	5¼	5¼ †	4	4	— 1⅛
17	9⅛	13¾	9¼	1	New Mex. & Ariz	1,800	10	10 †	9¼	9¾	—
17	8	11	9	25	New York Oil	800	.....	10¾	10	10	— ⅛
12⅛	8¾	12¾	11⅛	N.P.	North Cent. Texas	.....	.....	.....	.....	.....	.....
44¾	33	.....	.....	$25	Ohio Fuel Corp	.....	.....	.....	.....	.....	.....
33	28½	22½	21¾	....	Okla. Nat. Gas ctfs	.....	.....	.....	.....	.....	.....
10⅛	5⅞	9¾	5½	N.P.	Pandem	62,000	8¾	* 9¾	5⅝	6½	— 1⅜
12¾	11¾	12¾	10⅝	N.P.	Pantapec Oil	2,900	11⅝	11⅝	10¾	11⅝	+ ⅛
2¾	.20	.87	.26	N.P.	Peer Oil Corp	1,000	28	28	28	28	0
22¾	12	13½	9⅝	$10	Pennok Oil	300	.....	9¾ †	9⅝	9⅝	— ⅛
38	14⅛	24⅜	17	25	Red Bank Oil	.....	.....	.....	.....	.....	.....
30¼	12	15½	5⅝	N.P.	Reiter-Foster	1,400	7⅛	7⅜	6	6¼	— 1⅛
27½	22	27½	15	$25	Richfield Oil	1,600	16½	19¼	16	17	— ⅛
7½	4½	7	5	N.P.	Ryan Consolidated	900	.....	5½	5	5	— ⅛
10	7½	8	6¼	$10	Salt Creek Cons	1,700	7	7 †	6¼	6½	— ⅛
36	26⅞	32	27¼	10	Salt Creek Prod	8,200	28¼	28½ †	27¼	27½	— 1
4⅜	1⅜	7	3	5	Savoy Oil	.....	.....	.....	.....	.....	.....
27	7⅝	26⅛	17	10	Tidal Osage	1,200	20½	20½ †	17	19	— 2⅛
25¾	7⅝	23¾	15	10	do non-voting	3,500	18	18⅞ †	15	15½	— 2⅛
27	20⅞	23½	15¼	N.P.	Tide Water Assoc	21,800	16¾	16¾ †	15¼	15⅞	— 1⅛
99½	93¾	95¾	89	100	do pfd	700	91	91 †	91	90	— 1⅛
.....	.....	80	68½	100	Transcont. pfd	225	71¾	71¾	68	68	— 2¾
8	4⅛	7⅜	4¾	5	Venezuelan Petro	8,200	5⅛	5¼ †	4¾	5	— ⅛
30⅛	23¾	27⅞	25½	N.P.	Warner-Quinlan	130	26½	26½	25½	25⅝	— 1
36⅜	22	32¾	20¾	N.P.	Wilcox Oil & Gas	3,200	25¼	25¼ †	20¾	21⅛	— 2⅛
9½	4¾	8	5¼	$1	Woodley Petroleum	300	6	6	5⅝	5⅝	— ⅛

*New High †New Low xEx-Dividend

Pennsylvania Gasoline Market Strengthens

CLEVELAND, May 2.—Pennsylvania refiners today reported some improvement in gasoline demand and better prices. The predominating price for 58-60 U. S. Motor gasoline today was 9 cents although a few sales up to 9.25 cents were reported. A large refinery which last week was selling this grade at 8.50 cents, advanced its price to 9 cents today f.o.b. two points in western Pennsylvania.

Good demand was reported for kerosene. Prices of 45 and 46 were unchanged but range for 47 was extended 0.25 cent upward. The 36-40 straw color fuel was firmer with 5.25 cents the bottom price to the trade, as far as could be learned. Some was reported available at 5.125 cents for resale.

Viscous neutral oils remain scarce with many refiners sold up. One buyer said he believed a large part of the Pennsylvania output was sold up to June 1. Although two refiners quoted 200 viscosity No. 3 color at 33 cents, one buyer said his offer of 33.50 cents found no takers. Sellers' ideas run up to 35 cents. Sales of 150 viscosity neutral were reported at 28 cents.

Steam refined cylinder stocks still lacked strength and one lot of 600 fire test stocks was moved at 9 cents for resale. The buyer was asking 9.50 cents. Prices ranged upward with some sales as high as 11 cents. Filtered stocks demand and prices were steady. Bright stocks were reported as stronger today after recent slipping of prices. Long residuum stocks were reported to be fairly active with prices steady. Petrolatums were steady at unchanged prices. White crude scale was dull with prices lower in sympathy with the New York market.

Marketer Adds Equipment, Builds Stations

GAYLORD, MICH.—J. N. Hale became sole owner of the Pinnacle Oil Co. here on Feb. 24, which operates stations in Otsego, Crawford, Antrim and Montmorency, and in Charlevoix County. The company handles Marland products.

A new two-ton truck equipped with 635 gallon tank, and another truck with 365 gallon tank, have just been purchased by the company.

A bulk plant has just been completed and a service station is being built here. New pumps have been installed at several garages and stores here.

Wolverine Head Forms New Company

DETROIT, MICH.—Bruce J. Maguire, president of the Wolverine Oil Co., Lansing, Mich., and Ben T. Steers, Detroit, have organized the Steers-Maguire Corp. to own and operate service stations in Detroit. Mr. Maguire is president and Mr. Steers vice president.

Wolverine and White Rose gasolines and En-Ar-Co motor oil, the latter two products of the National Refining Co., Cleveland, O., will be handled.

THE OIL INDUSTRY EXCHANGE

Positions Wanted

REFINERY ACCOUNTANT, 30, twelve years experience in refinery. Formerly superintendent skimming plant. For past five years in direct charge oil refinery accounting for large corporation. Box 851.

REFINERY SUPERINTENDENT AND MECHANICAL ENGINEER—16 years with complete plants. Minimum overhead and loss. Maximum percentage and capacity. Box 853.

TRAFFIC MANAGER—8 years refinery sales and traffic experience, Mid-Continent field. Open for position May 15th. A-1 reference. Box 856.

WHO wants a wid-awake young oil man, who has had over twelve years' experience as Sales Manager and Purchasing Agent of the Domestic and Export departments of a large oil company? Have been abroad twice and am well acquainted with the Jobbers and Exporters both here and abroad.

Address Box 855, care National Petroleum News.

Have *You* Had

a hard time finding a thoroly capable assistant in any line?

Look for him through this page, which is read every week by all those in the industry who might be interested in a new and desirable connection.

The rates are low, too. Why not try it?

Business Opportunities

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Petroleum Products bought on small commission. Inquiries solicited and prompt attention given all requests.

C. Fred Mercer, 509 World Bldg., Tulsa, Okla.

Miscellaneous

Advertisers having box numbers should be addressed in care of National Petroleum News, 817 Huron road, Cleveland, Ohio, unless otherwise specified.

For Sale

PROSPEROUS OIL JOBBING BUSINESS FOR S....

Located in Illinois. 100,000 gallons storage. Doing 500,000 gallons annually. Priced reasonable. Good reason for selling.

Address Box 857

BULK PLANT FOR SALE. Complete in an Ohio City of 300,000 population. 160,000 gallon storage, 6 car garage. Address Box 858, care National Petroleum News.

COMBINED BULK PLANT AND SERVICE STATION BUSINESS FOR SALE

Located in Cleveland, Ohio. Doing annual gasoline gallonage of over one million gallons and handling national brand motor oil. Plant and equipment consists of warehouse, garage, filling station, two tank trucks and some equipment loaned to dealers. Can be purchased for less than inventory value.

For details address Box 859.

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Royalties under drilling blocks and wild royalties, in West Texas, at reasonable prices; advise specifically class of royalty you are interested in.

W. W. Hines, Box 1303, Abilene, Texas.

These Savings Will Increase Your Working Capital

—Savings made by selling tanks, pumps, engines, etc. which you have replaced with new equipment.

Clean out your store room and yards — don't have your money tied up in equipment that you are not using.

One well known company wanted to dispose of some tanks and in writing to us to discontinue their advertisement said,

"We have had a great many replies from this ad and are satisfied that it is an excellent medium for the disposal of surplus material."

You can get the same results.

Miscellaneous

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